PRODUCTION NOTE

Library Trends

Evaluation of Library Service

SARA R. REED
Issue Editor

January, 1974

Library Trends

A Publication of the University of Illinois Graduate School of Library Science

LIBRARY TRENDS, a quarterly journal of librarianship, provides a medium for evaluative recapitulation of current thought and practice, searching for those ideas and procedures which hold the greatest potentialities for the future.

Each issue is concerned with one aspect of librarianship. Each is planned with the assistance of an invited advisory editor. All articles are by invitation. Suggestions for future issues are welcomed and should be sent to the Managing Editor.

Published four times a year, in July, October, January, and April. Office of Publication: University of Illinois Graduate School of Library Science, Urbana, Illinois 61801. Entered as second-class matter June 25, 1952, at the Post Office at Urbana, Illinois, under the act of August 24, 1912.

Subscription price is $8.00 a year. Individual issues are priced at $2.50. All foreign subscriptions and orders should be accompanied by payment. Address orders to Subscription Department, University of Illinois Press, Urbana, Illinois 61801. Editorial correspondence should be sent to the Publications Office — *Library Trends*, 215 Armory Building, University of Illinois Graduate School of Library Science, Champaign, Illinois 61820. Indexed in *Current Contents, Current Index to Journals in Education, Library and Information Science Abstracts, Library Literature, PAIS,* and *Science Citation Index.*

US ISSN 0024-2594

PRINTED IN THE U.S.A.

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VOLUME 22 • NUMBER 3

JANUARY, 1974

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CONTRIBUTORS TO THIS ISSUE

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Introduction

SARAH R. REED

INVOLVEMENT with library evaluation today is on the increase. Those who have input through the library press or through conferences include librarians, library educators, practitioners from related fields, library consultants, research and development personnel, and the lay users who in one way or another pay the libraries' bills. The development of library systems, changes in the nature of library collections, the impact of new library and educational technologies and services, evolving social needs, and new concepts of library service all tend to focus attention on the need for successful evaluation design and implementation. Then, too, there is a growing realization that systematic programs of evaluation are essential to insure the effectiveness of developing library programs, if not their very existence.

During the 1920s, 1930s, and 1940s, there were sporadic attempts at evaluation, particularly as it related to library surveying and the development of library standards. The emergence of what was to become behavioral research just at the time of the first major thrusts of doctoral research in library science at the University of Chicago influenced the direction, and doubtless the character, of library evaluation. Certainly Louis Round Wilson, dean of Chicago's Graduate Library School from 1932 to 1942, impressed upon his faculty and students the relevance to librarianship not only of the scientific method but also of the research methods and findings in such fields as public administration, business administration, higher education, sociology, and industrial management.

In the late 1940s the emphasis on postwar planning for library development also provided fresh impetus for evaluation as a basis for planning.

In the 1950s and 1960s the funds available through such federal

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grant programs as the Library Services and Construction Act, and the monitoring of these programs, provided still further encouragement for building evaluation components into long-range plans for library development.

In the 1970s library evaluation, like all other areas of library activity, is affected directly by conflicting forces. Cutbacks in money necessitating retrenchment in programs have come at a time of rising expectations of library service to meet the needs of the total community. As the celebration in 1976 of the founding of the American Library Association approaches, the association is confronted with cleavages within the parent organization. Even the growing need for experimentation with interdisciplinary approaches in library evaluation comes at a time when, at least in some areas of librarianship, amateurish provincialism is more characteristic of evaluation activities than is competent utilization of the findings and the research methodologies developed in other fields.

Because the importance of evaluation of library services promises to grow in succeeding years, the contributors to this issue of *Library Trends* have attempted to address themselves to the state of the art and/or science of evaluation in their respective areas of librarianship and to discuss evaluative techniques and procedures used by librarians to determine the effectiveness of their programs (e.g., surveys, cost accounting, systems analysis, operations research, PPBS, MBO, PERT), and to identify significant evaluative studies completed in recent years, underway, or planned.

The seven papers assessing the state of evaluation in their respective areas of librarianship were read by three commentators experienced in the fields of (1) business and public administration, (2) sociology, and (3) librarianship.

For those librarians lingering in the pre-evaluative stage of librarianship, the three insightful commentators outline a number of clearly defined challenges. Among those deserving early attention are the following:

1. Is the library profession mature enough to achieve clearly articulated goals and to formulate valid standards for the various types of libraries?
2. Is there sufficient commitment among the professional librarians as to the importance of evaluation to attain effective built-in and continuing programs of library evaluation?
3. Can libraries develop an efficient delivery system which will feed

research findings back into the system to provide the means for correcting and changing it?

It would be difficult to find ten busier people than the authors who made this issue of *Library Trends* possible. It is a pleasure to express appreciation for their perceptive and provocative contributions to the literature of the evaluation of library services.

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Evaluation of Administrative Services

DAVID KASER

A SUBSTANTIAL ARRAY of heavy weaponry has come cently into the arsenal of management techniques which can aid in ıe evaluation of administrative services in libraries. Some of these new chniques have been overused, some have been underused, a number ave been misued; but their net effect has clearly been beneficial to the brary community. There is, however, an unsettling notion in the ıinds of some informed observers that the need for application of ,dditional evaluation techniques in libraries has grown more rapidly han their actual use, and that every day we scramble faster and faster while falling farther and farther behind.

Libraries were formerly simple—probably never as simple as they appeared in lay eyes to be, but simple nonetheless in comparison to libraries today. When calculated on a national base the inexorable sixteen-year doubling rate of research library collections identified by Fremont Rider in 1944 continues still, and it is attended by another equally unrelenting but less frequently noted change—a doubling also in complexity every sixteen years. Research libraries are today four times as complex as they were at the outbreak of World War II, four times as hard to use, and four times as demanding of rigorous social justification. It may be that the advance of management techniques has kept pace with the need neither in theory nor in application.

The distinction between theory and application is an important one to bear in mind throughout this discussion. All of the mechanisms to be mentioned here have been proved in theory; many have been proved in application in other industries; a few have been usefully applied in the library arena; some have not been applied anywhere at all. Regretably librarians have on occasion been castigated for not using newer techniques whether or not their application has been warranted or their viability proved. The credibility of librarians as modern managers deserves in many cases to be better than this castigation indicates,

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although it doubtless ought also to be better in many cases than it deserves now to be.

For several decades the key device for evaluating management in American libraries was the library survey, usually conducted by one or more visiting consultants who came to an institution, judged the overall library needs of the community, rendered an appraisal of the library's efforts to meet them, and provided recommendations for enhancing their effectiveness. Much of the survey had of necessity to be based more or less subjectively upon the expertise and intuition of the surveyor, but this was often supplemented by hard data—e.g., statistics on use and growth, comparisons with other similar institutions, and the checking of holdings against standard bibliographies and checklists.

Self-surveys have been a frequently seen variation upon the library survey, sometimes conducted simply out of institutional curiosity and desire to improve or, on other occasions, with the encouragement of the regional accrediting association, which then might or might not subsequently send in a library consultant as a member of a visiting accreditation team. A number of libraries have found it useful to appoint "boards of visitors" comprised of expert librarians and knowledgeable laymen to meet a couple of times each year to review developments and propose improvements.

Library surveys of these kinds have made substantial and abiding contributions to the evaluation of administrative services in libraries over the two score years between 1930 and 1970—and a few even earlier—and it is likely that they will continue to do so for a long time in the future.[1] They have earned for themselves a permanent role among methods for improving library management.

A recent convolution of the traditional survey, one which is self-done but with out-of-house guidance, has been utilized during 1973 by several large American research libraries. Developed by the Association of Research Libraries' Office of University Library Management Studies, the so-called MRAP (Management Review and Analysis Program) is designed to provide guidelines for internal evaluation of library management policies and activities. It comprises a structured framework for the systematic review and evaluation of a library's planning, policy development, organization, and personnel practices. It is intended to identify essential changes that should be made by the library to assure its greatest effectiveness. Preliminary reports of MRAP application have been favorable, and it appears likely that it will be more widely utilized in the future.[2]

Some of the recent innovations on the management scene that have

application to libraries are unidimensional in that they contribute to evaluation of a particular kind of activity only; others, such as MRAP, have across-the-board utility. Another example of the latter kind is found in the general concept of "Management by Objective" (MBO), wherein the appropriateness of all of an institution's activities is tested against a hierarchy of aims descending from the library's overriding purpose, through its continuing objectives, specific projects, strategies, and resources.[3] In theory at least, this pyramid of organizational objectives can cascade all the way to the individual librarian who then compares his service periodically against the objectives of his position as a mechanism for performance evaluation. Unfortunately, however, few libraries have as yet introduced programs of personnel evaluation based upon position objectives.

An interesting and seemingly converse position is proposed by the Library Management Research Unit (LMRU) at Cambridge University. Whereas MBO would call for an organization's overarching mission and objectives being determined first and then statistical data developed to measure progress toward those objectives, the LMRU suggests that most libraries, whether or not they have identified them by rigorous dialectic, already have some objectives implicit, if not explicit. If that is true, the LMRU opines, then library management's greatest need at this time is for instruments with which to measure operating effectiveness, thereby permitting refinement of those objectives.[4] Since the entire cycle of objective determination, operation, and evaluation is a reiterative process anyway, these two positions are, to a degree at least, head and tail of the same coin. Effectively carried out, either exercise could doubtless redound to the benefit of most libraries.

As long as libraries did not cost much, society appears to have been content to fund them on the assumption that their contribution to the public good was obviously in excess of the meager investment required for their sustenance. With their exponential growth since World War II, however, libraries have become very expensive to operate, and society is no longer so sure that they are worth their high cost. Accordingly, libraries are increasingly being called upon to provide more rigorous justification for their budgets. Fortunately some recent management innovations concern themselves with this matter of cost justification, and their application to libraries, although slow to come about, has been welcome.

Most of these processes for justifying costs rely in some way upon the preparation of simple cost-benefit ratios. Presumably a library *should*

be able to demonstrate that the dollar benefit derived by the community from its existence exceeds its dollar cost. Once demonstrated, the subsequent investment of society's funds in the library's continuation and enhancement would be assured. Anyone will invest where the return can be demonstrated to be considerably greater than the expense; banks will even lend money for its accomplishment. Regrettably, however, libraries, as most other service agencies, have had difficulty quantifying the dollar benefits of their services to users, and as a result progress toward cost-benefit evaluation of libraries is languishing. Nonetheless, further efforts by libraries to develop such budget justifiers seem warranted.

A shorter step toward the same goal, but a potentially useful one for libraries, is to develop input-output indices for purposes of cost rationalization. These are ratios of cost-to-productivity for the library's several "product lines," such as reference questions fielded, circulation of books, or hours of user contact with books.[5] Again, however, most libraries have been unable to come to grips with the problem of identifying the "irreducible unit of productivity" in library service to function as a numerator against which cost data can be passed as denominator for purposes of assessing effectiveness of library expenditures on a continuing basis. Not only can such cost-to-productivity information, where developed, serve as a continuing institutional check upon its activities in a linear sense; given adequate consensus on cost and productivity definitions, such data can also serve for purposes of comparative evaluation among a number of libraries. It would also appear essential for a library to have such data on present operations in order rationally to determine whether or not to install a new system with different cost and productivity characteristics.[6]

Certainly in the profit sector such calculations as these are commonplace; indeed they are necessary if the institution is to stave off bankruptcy. There are nagging doubts in some librarians' minds, however, as to whether they can, or should, be applied to libraries. In general, these doubts seem to spring from one or more of three basic considerations, two of which are practical, and the last of which is primarily philosophical:

1. the aforementioned problem of identifying an "irreducible unit" of library service requisite to such calculations; it may be that libraries are too diverse and interactive in their services to permit a discrete determination of this kind to be made;
2. the fact that libraries often do not comprise total business

systems—from purchasing to checkwriting—wherein an EDP-based flow of accounting and charge-back information can facilitate the development and delivery of such continuing calculations; and

3. the inherent discomfort that accompanies any effort to assign a dollar value to the reading of a fine poem, an invigorating discourse, or an absorbing mystery.

These may well be real and insuperable barriers, or they may be rationalizations to support the retention of the better understood status quo. It is hard to judge. The fact remains, however, that many members of library boards find their livelihood in the profit sector where hard proof of cost effectiveness is required for survival, and if libraries are going to compete successfully for a fair share of society's resources, they will probably have increasingly to provide evaluation machinery that relates inputs to outputs in some more compelling format than most have used in the past.

Another manifestation of the ambient social pressure for rigorous proof of need has been seen in the much discussed and widely advocated PPBS, or "Planning-Programming-Budgeting System." Originating in the Rand Corporation, PPBS was first applied in the Department of Defense, and then by presidential directive in 1965 it moved into other federal agencies. PPBS rapidly spilled over into the higher education community, where by the end of the decade its utilization was being enthusiastically urged upon university libraries.

A number of large libraries flirted with PPBS,[7] and some library literature was generated on the subject.[8] Essentially PPBS calls for planning by objective, selection of programs following evaluation of alternatives utilizing sophisticated measurement techniques, and appropriate allocation of resources, all carried out in a single, structured, management framework.

Almost as fast as it came into being, however, enthusiasm for PPBS began for a number of reasons to wane, both in the general management field and in libraries.[9] Much of the general disaffection with PPBS seemed to result from three factors: (1) greater benefits had been claimed by its proponents than it was in many cases possible to deliver; (2) its successful application required staff skills not widely available nor easily obtained; and (3) its effective introduction usually required the investment of substantial supernumerary funds which were infrequently forthcoming. Its use in university libraries moreover was further balked by philosophical doubts in some quarters as to whether or not libraries indeed had "programs" that could be so studied and

evaluated; perhaps the academic programs of the university were the discrete units subject to such study with the attendant library cost of each identified only as a subordinate budget line. This last question, of course, is simply a new way of asking the old question of whether the library should lead or follow in academic policy determination; it probably cannot presently be answered in a manner that will be satisfactory to everyone.

At any rate, as of the time of this writing, it appears that PPBS as originally conceived is no longer likely to be used in libraries. This is not to say that it has failed. On the contrary, its short life has been salutary in libraries because it gained wider recognition than had previously existed of the need for libraries to view their costs in new ways—ways that would require and demonstrate consciousness on the part of library managers of their obligation to be fiscally as well as intellectually "accountable" to the society of which they are a part.

A whole new discipline of use to library evaluators has come into being the past three decades with the advent of Operations Research. The term OR generally embraces a range of objective mathematical computations and systems analyses of assistance to managers in decision-making. Abetted by the availability of computers, OR can now bring new insights to bear upon library problems which simply were not previously possible to develop. Linear programming techniques thus can be applied to a library problem wherein relevant variables are assigned sequences of values until their most desirable configuration becomes apparent and the best alternative selected.[10] Likewise mathematical models that imitate "real-life" library situations can be constructed by operations research methodology, and the impact of different possible futures upon them appraised, so as to permit informed rather than intuitive decisions to be made *before* the fact, thereby reducing expensive and unnecessary experimentation.[11]

Bookstein and Swanson have usefully pointed out that most OR efforts in libraries to date have shared as a single key attribute the quest for an optimum, whether it is for network design, directory design, library use, journal use, the number of copies of a book, the loan period for a book, or simply cost.[12] This is a healthy reversal of previous motivators in libraries which have most often been quests for maxima rather than optima. Bigger is not necessarily better, in libraries as in other human enterprises, and OR techniques can aid libraries that would make rational determinations of the difference.

For a multiplicity of reasons, OR has not yet been used extensively in libraries. Among reasons given for its slow adoption are a widely held

belief that most libraries are too small to benefit from OR applications, a general unawareness of the wide-ranging capabilities of OR techniques, and shortage of librarians trained in OR methodology. To a degree at least, the last factor need not pertain, because it should be possible for a library needing an OR application to purchase it in the ad hoc consulting market in the same way a library buys legal counsel. Some efforts of this kind, however, have failed because of the difficulty of client libraries acquainting the consultants adequately with the complexity of their problems to assure useful results. Fortunately a growing number of librarians is gaining the rudiments of OR understanding, and the next ten years is sure to see an increase in its application to libraries. A recent selective bibliography on library OR contained fully 153 items, and the literature of successful theory and application grows daily.[13]

Bigness and complexity in libraries bring problems, but happily they also bring opportunities. One of the greatest opportunities resulting from bigness now before the profession is certain to be the prospect of applying more meaningful evaluation techniques than were possible in earlier times. Better evaluation techniques will mean better decisions, and better decisions will improve the library economy for the commonweal. The prospect of such improvements promises exciting times for library managers.

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3. MBO is perhaps most fully developed *in* John W. Humble, ed. *Management by Objectives in Action*. New York, McGraw-Hill, 1970. See also: Granger, Charles H. "The Hierarchy of Objectives," *Harvard Business Review*, 42:63-74, May-June 1964.

4. Schofield, J. L. "PPBS and Some Related Management Systems in Great Britain," *Libri*, 23:75-79, No. 1, 1973. The LMRU has done a substantial amount of work developing evaluation capabilities for libraries since its establishment in 1969. See for example: Smith, G. C. K., and Schofield, J. L. "Administrative Effectiveness: Times and Costs of Library Operations," *Journal of Librarianship*, 3:245-66, Oct. 1971.

5. The Joint University Libraries, Nashville, has probably done more than any other library system to relate costs to productivity. Since the JUL in effect sells its services to its three constituent institutions under contract, it is essential that it has such data readily at hand. See: Joint University Libraries. "Com-

prehensive Organizational/Operational Planning." Nashville, JUL, Oct. 25, 1972.

6. Theoretical aspects of this concept are most fully developed *in* Morris Hamburg, *et al.* "A Systems Analysis of the Library and the Information Science Statistical Data System, Parts I and II." Philadelphia, University of Pennsylvania, June 1970.

7. A selection of examples was reviewed in a paper read before IFLA at Liverpool in August 1971, and published as: Buckman, Thomas R. "Planning-Programming-Budgeting Systems in University, National, and Large Public Libraries in the United States," *Libri*, 22:256-70, 1972. See also: "Review of Budgeting Techniques in Academic and Research Libraries," *ARL Management Supplement*, 1(2), April 1973.

8. Perhaps the most profound single study to date on the use of PPBS in libraries is: De Genaro, Guy Joseph. "A Planning-Programming-Budgeting System (PPBS) in Academic Libraries: Development of Objectives and Effectiveness Measures." Ph.D. dissertation prepared for the University of Florida, Gainsville, 1971.

9. For a brief summary of the metoric course of PPBS in libraries see: Allen, Kenneth S. "Current and Emerging Budgeting Techniques in Academic Libraries." Seattle, University of Washington Libraries, April 1972, pp. 4-18. (Unpublished paper)

10. A number of studies of this kind related to library warehousing, storage, and similar problems have been successfully conducted over the past decade at Purdue University and are reported in masters' and doctoral papers from that institution.

11. An interesting mathematical model of a library for use in library education has been developed at the University of Lancaster in England.

12. Bookstein, Abraham, and Swanson, Don R. "Introduction [to Operations Research: Implications for Libraries]," *Library Quarterly*, 42:4-5, Jan. 1972.

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Evaluation of the Collection

GEORGE S. BONN

EVERY LIBRARY exists chiefly to serve the needs of its own community of users. It follows, then, that any overall evaluation of a library ought to be based chiefly on how well it does, in fact, serve those needs.

A comprehensive evaluation of one library or of similar components in several libraries is necessarily complex and is usually complicated. It requires considerable professional expertise and judgment and a goodly amount of tact; normally it is broken down into a number of separate evaluations of the individual components of the library or libraries being surveyed. More often, perhaps, some one part of a library may be evaluated by itself on an ad hoc basis; and the one part that seems to be most commonly evaluated is the library's collection of books and periodicals, conceivably on the assumption that the collection is the best tangible evidence of what goes on behind the scenes in a library and of what a library is all about out front. In addition, the collection lends itself more readily to physical observation, systematic checking, and statistical manipulation, if not so readily to a judgment of its quality.

It is generally agreed that both the quantity and the quality of a library's collection depend almost entirely upon the library's acquisition program, including its acquisition policy, its acquisition procedures, and, of most importance, its selection methods. So an evaluation of a library's collection is, in effect, an evaluation of its selection methods as well, although it may not always be possible (or even worthwhile) to pinpoint the precise cause (a specific selection or acquisition mechanism) and its effect (a definite resultant change in the quality of the collection) using the methods customarily employed to evaluate a library's collection.

It is now also generally agreed that any evaluation of a library's collection must take into account the library's stated goals, objectives,

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mission, or however else it defines its reason for being, in the context, when appropriate, of the goals, objectives, or mission of a parent organization or even a system to which the library may belong. Even more to the point, a standardized test is now available which may be used to evaluate a library's capability of delivering a required document from its own, or from any other, collection, a rather natural development brought about largely by the growth of library networks, systems, resource centers, and other interlibrary cooperative projects as well as by the growing acceptance of the fact that no library, however resolute, wealthy, or long established, can have everything that anyone could possibly want.

Technical libraries particularly have been extensively and intensively studied in recent years especially to develop criteria to measure their "effectiveness" in given situations. While a technical library's collection of books, journals, and other documents is one of the several important features considered in these studies, most attention seems to be paid to the way in which the materials are analyzed and indexed for efficient information retrieval, thus this large and somewhat specialized literature will not be covered in this discussion. The literature on evaluating just the collection and the antecedent selection element in the acquisition process is sufficiently large as it is, and deals mostly with academic libraries, possibly because of the prevalence and pressure of accreditation standards for these institutions and of the importance attached to academic standing among these institutions.

Methods of Evaluating Collections

Over the years several quite different techniques have been developed to evaluate library collections for a number of purposes. They have been applied in varying configurations, sometimes independently but more often in conjunction with one or more other techniques, and with varying degrees of success depending on how well the chosen method could really get at the intended purpose of the evaluation. For example, the quantity of a collection—its numerical size—has always been relatively easy to ascertain assuming accuracy, objectivity, and the use of standard units of measurement on the part of the enumerator. The quality of a collection—its relative excellence or its value or worth in the particular situation—has always been more difficult to judge objectively.

The large and, in part, repetitious literature (see General Background Reading list) identifies five reasonably distinct methods for

evaluating library collections plus one or two others that do not quite fit into any of the five: (1) compiling statistics on holdings, use, expenditures; (2) checking lists, catalogs, bibliographies; (3) obtaining opinions from regular users; (4) examining the collection directly; and (5) applying standards (using various of the foregoing methods), plus testing the library's document delivery capability, and noting the relative use of several libraries by a particular group. The latter two in number 5 do take more into consideration than just the one library's collection, but in each case the adequacy of the collection being studied determines what, if any, next steps to take to satisfy the library's users.

COMPILING STATISTICS

The main advantages of this method are that statistics are easily available, easily understood, and easy to compare; the main disadvantages are lack of standard definitions of units, possible lack of distinction between titles and volumes, difficulty in counting nonprint material, and possible inaccuracy or inconsistency of published data.

Perhaps the most common objection to statistics is that in themselves they do not, indeed cannot, measure quality.[1] But, of course, they may not necessarily be expected to; simple numbers may be all that are wanted or needed for the purpose in mind. Another objection is that statistics are not likely to be related significantly to the library's community or to the library's goals and objectives; but neither are some of the other methods frequently used to evaluate collections. Part of the problem here is that neither the library's community nor the library's goals can be described easily in terms that can be readily evaluated objectively. Nevertheless, compiling statistics on libraries has been a diversion of librarians for many years.[2] Statistics can be compiled on any of the following.

Gross Size—is a straight count of total volumes in the library, of only reference books, of periodicals currently received, or of nonprint material; it may be broken down by class and may be reported per capita. It is generally agreed that size does mean "something" and that there is a positive correlation between the size of a library and, for example, the excellence of the academic institution to which the library belongs measured by composite scores of academic ratings (high ranking colleges need a minimum of 50,000 volumes),[3] by number and variety of graduate degrees granted (high level diversified doctoral work requires a minimum of 1,500,000 volumes),[4] or by membership in prestigious associations.[5] Specialized technical institutions are recognized exceptions to the general rule in every case.

It is also felt that there is a definite relationship between the size of a given collection and its ability to respond to the needs of its clientele expressed in terms of a probability,[6] and that the probability will be even greater if the collection has been intelligently selected by competent professional librarians.[7]

Since there seems to be a high positive correlation between quality and quantity, one writer said, "quality becomes of serious concern only in the small library"[8] where, consequently, competent professional librarians would seem to be most needed but where, unfortunately, they seem to be most lacking, except, of course, in special libraries.

Another writer feels that since all resources do not have identical utility and information, the probability of finding a useful resource is dependent on the nature of the request and the nature of the collection rather than on the size of the collection.[9] An example might be the usual special library collection which is very small in size, but is exhaustive in its specific subject coverage and is deliberately kept up to date by rigorous weeding. A collection of 5,000 books in such a library could be more useful than 10,000 books on the same subject in some other kind of library.[10] This does suggest that professional development, maintenance, and exploitation of a collection, taken together, are more important than size.

Volumes Added Per Year—is a straight count or by class or per capita. This figure is considered to be more significant than the growth rate and is used in an evaluation along with the gross size.[11] "The real test is the number of relevant volumes available to the visitor on each topic in each library."[12]

Formulae—are based on an acceptable core plus volumes per student, per faculty, per undergraduate field, per graduate field (Clapp-Jordan);[13] based on total volumes, volumes added annually, number of current periodicals (Cartter);[14] based on resources, population, circulation, research capability (Beasley).[8]

The Clapp-Jordan formulae (for books, for periodicals, for government documents) were proposed in 1965[13] but were not studied empirically until 1972.[15] Statistical regression analysis was used, and it was found that for university research libraries the Clapp-Jordan books formula may be considered a conservative guide to minimum-sized adequate collections.[16] Another result of this same study is the impression "that for some academic institutions [e.g., Harvard, Yale, Illinois, Duke] the library is more than just a resource for teaching and research but is something of an end in itself" and that "some univer-

sities have been prepared to develop national or regional libraries while others have been more content to restrict their ambitions to the needs of teaching and research on their campuses."[17] In a comment on this study another writer discusses his own use of the Clapp-Jordan formulae and suggests that a more viable formula for determining an adequate collection for normal academic teaching and research should take into account (1) the level of service desired in terms of immediate satisfaction of demand for volumes (e.g., 95 percent); (2) the rate of obsolescence of volumes; (3) the publication rate of relevant material; and (4) the need for multiple copies, and he offers ways of getting the necessary information to plug into the formula.[18]

One shortcoming of the Clapp-Jordan books formula has been pointed out earlier—it does not "reckon with the difference in book needs between, say, history and engineering; rather it assumes a universe of subjects will be covered by the academic community and thus the differences among subjects even out as do the differences in use of the library by individuals."[19] A variation of the Clapp-Jordan formula was used to estimate the new size of a book collection after expansion of the college library to a university library.[20]

The Cartter "library resources index" was used in 1966 to correlate quality in graduate education and library resources. The institutions that are strong in all areas invariably have major national research libraries, and all the universities with overall faculty quality ratings of "strong" or "distinguished" scored relatively high on the library resources index; exceptions were noted (and explained) among institutions specializing in technology or in advanced work in a very limited number of areas, as in the case of gross size correlation mentioned earlier.[21]

The Beasley formula was proposed in 1968 for potential public library service: B = all resource material, perhaps weighted; P = population served; C = circulation; and S = study or research factor (which could be an arbitrary figure).

$$\text{Potential service} = \frac{B}{P} \times \sqrt{\frac{C}{P} \cdot S} \cdot$$

No attempt was made to measure quality on the assumption that it is primarily a function of the type of personnel,[22] a point made earlier under gross size.

Comparisons—concern studies done at the same library at different times or with comparable libraries (in similar cities or institutions) at the same time. Other factors being equal, progress or improvement in

a library may be measured by the change in size of its total collection or of certain parts of it from one year (or one decade) to another. Relative sizes of comparable libraries indicate relative adequacies of their collections, other factors again being equal. One assumption in such comparisons is that libraries buy good and bad books in comparable proportions, an assumption valid enough for most purposes,[23] particularly if competent professional librarians make the selections.[24]

Subject Balance—studies give proportional analysis by class, by duplicates, by authors, by dates, and by relation to courses offered. Such analyses will reveal subject strengths (or perhaps biases on the part of the selectors) and possible mismatches with local needs, with "standard" (or opening-day) collections, with recommended percentages,[25] or with department teaching or requirements in educational institutions.[26]

Unfilled Requests—are kept for books, for journals, and for specific information. Of course, *filled* requests could be counted instead and a "performance index" (ratio of material used to material requested)[27] could be figured for each form of material, for each subject class, for each branch or public service department, or even for an SDI (Selective Dissemination of Information) program.[28] Hopefully, the unfilled requests would be fewer so it would be less trouble to record them as they are discovered and then to compare periodic totals at suitable intervals. It would have to be assumed that the lacking or missing books or journals should have been in the library in the first place, and that the unanswered questions came about because the probable resource books were not available rather than because a staff member blundered.

Interlibrary Loan Requests—are similar to unfilled requests. A recent study of interlibrary loans has pointed out that the larger libraries (100,000 volumes and over) not surprisingly *lent* over 90 percent of the total number of volumes that were lent during 1963-1964 (presumably the latest data available). And at the same time, they *borrowed* over 71 percent of all the volumes that were borrowed during that period.[29] Most of this (67 percent) was by academic libraries.

Of the 28.8 percent borrowed by small libraries, 17.9 percent was by special libraries. However, many special librarians, notably of larger technical libraries, have set in-house standards of performance for their collections: *maximum* limits, in effect, on the number of outside interlibrary loan requests they will make and *minimum* limits on the

numbers of loans that must come from their own collections. Thus, one librarian considers his library an "adequate literature resource needing only standard augmentation" if the collection "can supply 95 percent of the items required by the clientele." But "if the library must go outside for 15 percent or more of its loans, it should increase its acquisition rate."[30] Performance expectations of 90 to 95 percent seem to be fairly common among larger special libraries.

For comparison, a 1970 study of research articles published in 1966 and 1967 by faculty members from 87 departments of the University of Illinois and 83 departments of the University of Michigan found that each university library held 92.5 percent and 90.5 percent respectively of the works cited by their own faculty members.[31] An earlier study of 23 engineering dissertations completed between 1950 and 1954 at Columbia University found that 86 percent of the monographs cited and 78.5 percent of the serial titles cited were available in the Columbia University libraries.[32] Evidently no library, even a large one, is an island unto itself, a fact librarians have long since conceded but only recently began preparing for by constructing resources centers, networks, and systems.[33]

Optimum Size—is the size needed to satisfy x percent of the requests of the library's clientele.

How big does a library have to be to supply, for example, 95 percent of the items required by its users or to satisfy some other similar performance objective set by the library? Or, conversely, how comprehensive *is* the coverage of a given library collection? Briefly, the question can be answered as far as journal holdings are concerned from local journal-use statistics, provided that the library's interest is sufficently specialized.

As one author puts it, "The extent of the coverage of relevant literature by a specialized information centre could be measured with accuracy, if one only knew what constituted comprehensive coverage." He further proposes a way of finding this out: "Perhaps from the system viewpoint, a method of estimation based on the Bradford-Zipf distribution, as suggested by Brookes . . . would be the best way of evaluating coverage."[34] In the article cited, Brookes concludes: "The application of the simple or the modified Bradford law to the documentation of a 'single' scientific or technical topic enables an estimate to be made, from a small count of the most reliable fraction of the data, of the number of journals that would be found in a 'complete' search of the documentation of the topic."[35] Theoretically, it may also be possible to apply a more modified technique to large general collec-

tions of documents in which many "single topics" are merged, but empirical data on general collections are very scarce.[36]

Two other authors use Bradford's law of dispersion to establish minimum holdings of medical journals in a "dynamic library collection" by determining the "nucleus of journals" from circulation figures, the "nucleus of best customers" (and their journal preferences), and combining them. The budget will determine the level of performance (measured by Bradford's "zones") possible in a given library.[37] In a later article, "Optimum $P\%$ Library of Scientific Periodicals,"[38] Brookes recommends that the value of P be determined by the "cut-off point at which it becomes more economic to borrow than to buy" the needed periodicals. P is the performance of the library's collection in producing wanted items.

On a somewhat less technical level, last circulation dates have been used to determine the optimal number of books for a library's core collection of most-likely-to-be-used books, set at any desired performance level.[39] The same technique also has been used specifically on fiction.[40]

Circulation—can be figured for the total, by adults, by children, by faculty, by students, by class, by purchase date of book, by date of use, by stock turnover per year, or per capita.

Gross circulation statistics are useful for comparisons, for example with figures for different years or for different libraries, and they tend to be used to demonstrate to higher authorities how well the library is serving its clientele. Public libraries are more likely to break the statistics down by class and per capita than are academic libraries, but both normally keep track of use by categories of users.[41] Special libraries are especially concerned about the use of recently acquired materials: they should be used at least once before they are a year old.[42] Small public libraries also make use studies of recent acquisitions as checks on current selection policy: 80 percent of the latest purchases were found to circulate five or six times within a three-month survey period, according to one such study.[43] Latest-use data have been used to establish optimum core collections, too, as was noted in the previous section.

Other circulation data show up in standards—for public libraries in the United Kingdom by stock turnover and per capita,[44] for example, and for academic libraries by faculty and by students.[45]

Proportionate circulation statistics by subject class compiled over a definite period are excellent checks on overall selection policies and

acquisition rates when compared with proportionate holdings statistics by subject class. The ratio of use to holdings in specific subject classes, both expressed as percentages of the respective totals, is the "use factor" for that subject class and may be determined as specifically or in as much detail as desired, provided that both the circulation and holdings statistics are equally as specific or detailed in the first place.[46] Use factors can measure the intensity of use of all or part of the main collection, or of separate collections such as reference books, reserve books, textbook banks (as in India), or any other special category, and can be used on various kinds of circulation such as overnight, in-library, or interlibrary. The survey period may be as long or as short as conditions (and personnel) warrant.

Such proportionate analyses as these were parts of three comprehensive surveys of Indian libraries made by the author during 1970, one of which was of a developing university library of 86,000 volumes during an eleven-week period. In all three the calculated use factors for various subject classes alerted the surveyor and the library directors to overdeveloped as well as underused areas and to unexpected weaknesses in holdings that were most used by certain large, but largely ignored, categories of patrons. In one instance, the underuse in a particularly important subject coincided with overborrowing from other libraries in the same subject; an investigation quickly spotted the reason: the old age of the underused part of the collection which previously had been built up and then left to itself while other areas were being built up, piecemeal.

Many librarians, of course, are continually aware of the proportionate use of their collections whether or not they do any formal calculating. Public librarians, especially those with smaller collections, have a real need to be aware of the use made of what they have selected for their libraries. As has been pointed out earlier, they do not have size "going for them" so quality in terms of local interests and needs is of prime importance. Some librarians, e.g., the British Council librarian in Bangkok in the spring of 1971, watch monthly class circulation figures to check the proportionate use of selected parts of their collections. Merritt suggests that the statistical relationship between holdings and circulation (and he adds acquisitions, too) should be considered from time to time "to discover whether certain changes in emphasis might not be in order."[47]

One writer has classified academic courses by Dewey Classification (DC) groups and has matched these course class groups with classed book lists to determine probable book needs by department,[48] with his

library's shelflist to check possible adequacy,[49] and with book use to find out how the two correlate,[50] but not, apparently, with each other. (In India this author used course textbooks and reading lists to get at course DC-class structure, so to speak, but the spread of book classes was too great to be meaningfully synthesized or averaged, so that part of the project was dropped.)

Academic libraries with computer capabilities could easily keep running tabs on library holdings, acquisitions, and use by computing any desired use factors or other proportionate analyses, and could correlate any or all of them with the academic courses that are offered, provided, of course, that the necessary data were put into the computer. At least one library seems headed in that general direction: by using computer-produced circulation records it has studied the use of materials in relation to loan policy, use by defined groups of borrowers, and the use of heavily used materials, all of which are said to have had direct effect on acquisitions.[51]

Expenditures—can be found annually for books and periodicals, annually for library salaries weighted by enrollment, or per capita. Conceivably, the total monetary value of a library's collection could be one more statistic by which to evaluate it, quite literally. Rarely if ever, however, has this gross figure been used or proposed as a suitable measure. Current expenditures, on the other hand, are used regularly in evaluating libraries along with other statistics and other measuring procedures, and they have been recommended as suitable measures by which to evaluate collections[52] on the assumption, perhaps, that the adequacy of a collection depends in great part on its continuing support both for materials and for professional development. Salary and book expenditures also figure in recommended standards.[45]

It must be apparent by now that no library collection should be evaluated only on its own merits, for without adequate financial support and a competent professional staff to develop it, to manage it, and to exploit it properly, a library collection is just an accumulation of different kinds of artifacts, taking up space and existing only to be counted.

CHECKING LISTS, CATALOGS, BIBLIOGRAPHIES

The main advantages of using lists as a method of evaluating collections are that many comprehensive and specialized lists are available in published form; many lists are updated regularly; most lists are compiled by competent professional librarians or subject specialists; ad hoc lists can be geared to individual libraries or types of libraries and to

particular interests or needs of libraries; most are relatively easy to use; and most are relatively effective in producing an answer. The main disadvantages are that published lists may have been used previously as buying guides by the very library being evaluated; lists are arbitrary samples; published lists soon become outdated unless systematically revised; published lists bear no necessary relationship to a given library's community or to its interests or needs; and lists assume that a core of works exists for every group of libraries.

A common objection to lists as evaluation instruments is that they themselves are are not necessarily standards of quality, an elusive concept at best, so checking a list cannot evaluate the quality of a collection any better than statistics can; the result will be a statistic, too, the number or percentage of the works listed that happen to be held by the library being surveyed. Another frequent criticism is that a list gives no credit for books the library holds that are not on the list but that are as good as or, for local needs, even better than the books on the list the library does not hold.

Nor does a list automatically rate or grade the quality of a library according to a specified standard number or percentage of titles found to be in the library. Presumably, the more titles held the better the library, but how many must be there to get an "A" in quality or adequacy?

Nevertheless, list checking is very common in evaluating library collections, individually or in groups, and the results do tell something about a library's holdings relative to the list used. In spite of the time, cost, and tiresomeness of checking lists, the best yardsticks of adequacy are still "those to which we have become accustomed—the book-selection list and the specialized subject bibliography, frequently reviewed and brought up to date by experts and in the light of use."[53]

Especially compiled lists that are tailored to the particular library or libraries and for well-defined purposes are generally considered much more reliable as evaluators of quality than are the readily available published lists (even those with starred titles) which may be more profitably used as selection guides—which most of them were intended for in the first place. The literature on the use of checklists for evaluating collections is quite extensive and goes back at least into the 1930s.[54]

Standard Catalogs and Basic General Lists—are exemplified by ALA's basic collections trio; H.W. Wilson Company's standard catalog quintet; Bro-Dart's *Elementary School Library Collection; Junior College Library Collection; Books for College Libraries; Choice's* Opening Day Collection;

and the Ontario New Universities Library Project. Carnovsky says, "Perhaps the earliest use of a comprehensive list was made in a Chicago area library study in 1933, when the collections of seventy-nine libraries were checked against the 1926-31 *ALA Catalog*."[55] The celebrated "Shaw list" *(A List of Books for College Libraries)* was first published in 1931[56] and soon became very popular both as an evaluative checklist of holdings and, especially, as a buying guide, partly no doubt because it was so frequently used as a checklist for college accreditation purposes.[57] Danton used it in 1935 to check excellence of selection in college libraries.[58]

Books for College Libraries, the 1967 successor to the Shaw list, was prepared originally for the new campus program of the University of California which involved the simultaneous development of basic undergraduate libraries of 75,000 volumes each for the new San Diego, Irvine, and Santa Cruz campuses.[59] It lists 53,410 titles.[60] The Ontario project was set up to provide basic undergraduate library collections of 44,510 volumes in each of five new universities and colleges in Ontario: Brock, Guelph, Trent, Erindale, and Scarborough.[61]

Catalogs of Important Libraries—are often used, e.g., those of Harvard's Lamont, Princeton's Julian Street, Michigan's undergraduate, Engineering Societies (and other similar G.K. Hall sets), and the Library of Congress. These libraries are distinguished in their fields and the catalogs are reasonably up to date. The Library of Congress may seem out of place here, but on at least three occasions the LC collection was used to evaluate the holdings of the University of Florida library proportionately in subject fields in which Florida was acquiring materials. Sampling and shelflist measurements provided the data for a recent study, and a high correlation in subject content was found throughout twenty-eight subject areas.[62] Processed catalogs of some of the important specialized library collections have become available in recent years, too, and these have been found useful as subject or area checklists in addition to other purposes they might serve.

Specialized Bibliographies and Basic Subject Lists—include lists published by professional, technical, and learned societies; guides to subject literatures; definitive bibliographies of major authors; and comprehensive or selective bibliographies in subject areas. Examples and reports on their use are, indeed, numerous.[63] These specialized bibliographies and lists, like the catalogs of specialized collections, are useful as subject or area checklists and are frequently used along with

standard or general lists in comprehensive surveys of larger academic libraries.

Current Lists—include best sellers, prize winners, best books of the year, books of selected publishers (university presses, professional societies, government agencies), and annual subject compilations.

Again, examples and reports on use are numerous. Users usually are cautioned that lists such as these must be used even more discriminatingly than established standard lists. The best books published may not all be the best books for a particular library and the best sellers may not all be of more than passing interest, to say nothing of lasting value. Large libraries may have standing orders for the books of certain publishers so checking their lists may be useful only to evaluate dealer performance rather than the up-to-dateness or adequacy of the collection.

Reference Works—include those listed in standard guides to reference materials, either universal or specialized in their coverage. Reference works would normally be caught in a checklist evaluation of a library's collection among the titles in catalogs and on standard lists and subject bibliographies, or they may be checked separately using standard reference guides along with other specialized lists the surveyor may choose. More than thirty-five years ago one investigator concluded that checking just reference books (and not the whole collection) against selected lists would be satisfactory as one among six measures of library excellence recommended for inclusion in accreditation standards.[64] For the next twenty-five years these six measures were used by a number of regional and professional association accrediting teams to evaluate libraries,[65] but now they are gradually being replaced by more comprehensive but less specific measures geared more to the goals and objectives of the individual institutions. However, the reference collection is still inspected critically in any library evaluation.

Periodicals—lists include those of titles currently received, titles kept and bound, backfiles, those listed in standard directories or other compilations (e.g., universal, or by subject, language, country, region, type of library, kind of user), or covered by standard or specialized indexing or abstracting services. Checking periodicals currently received on lists of preferred titles was the only other resources measure of the six referred to above as being recommended for inclusion in accreditation standards.[64] (Two of the other four were faculty and student loans mentioned earlier under *Circulation*. The other two were

salary and book expenditures, also noted earlier.) The periodical collection, like the reference collection, is always examined carefully in any library evaluation, and most thoroughly in technical libraries.

Useful perspectives on a library's periodical collection may be readily obtained from a composite table of the numbers currently received and the backfiles, arranged by subject (as specific as desired) and by country (or state) of origin. Knowing the subject interests of the library's users or parent institution and the countries or cities of the world where these subject interests are strong (in research, development, application), the surveyor can quickly spot strengths or weaknesses in the collection in both subject coverage and country coverage of important subjects.[66] Similarly, a table arranged by subject and by type of publisher (professional society, trade association, government agency, research institute, academic institution, commercial house) can be useful to check appropriateness and authoritativeness of the material received and kept.

Authorized Lists—are prepared by federal, state, regional, or local authorities or by professional associations. While these lists primarily are recommended buying guides, a particular list can be used to determine the proportion of its titles that were actually acquired by a library which may, in turn, decide eligibility for recognition of some sort or indicate the level of the collection depending on the quality of the list. Such lists seem most prevalent in the school library field, but they also are specified in the educational accreditation standards of a few professional associations: e.g., Library Schedules A and B in the *Standards for the Approval of Law Schools* by the American Bar Association[67] and *A Basic Music Library* . . . of the National Association of Schools of Music.[68]

Ad Hoc Lists—are tailor-made to meet the needs of the particular survey and to match the objectives, purpose, and interests of a particular library or group of libraries; they are usually drawn up by the surveyor from many sources. Ad hoc lists have been used very effectively in multilibrary surveys to evaluate strengths of the libraries relative to one another.[69] They have been used very effectively also in single library surveys especially when they related directly to some specific objective of the library such as supporting course work.[70] As noted earlier, ad hoc lists are considered more reliable as checklists than pre-published standard catalogs or basic lists.

Citations—include footnotes, references, bibliographies in significant works in the field or fields of the library's interest. A variety of types of

publications have been used or recommended as citation sources: theses,[71] definitive works,[72] terminal bibliographies,[73] journals, journals most used in the particular library,[74] textbooks, state-of-the-art reviews, and faculty research publications,[75] to name a few.

The evaluation is usually based on whether or not the chosen work, or a substantial part of it, could have been written in the library being surveyed. One assumption is that the present library and the one the author probably used are very similar in purpose, size, and subject coverage. Another assumption is that the work being checked is the kind that could be and ought to be written in the present library.

One problem is that authors are only human and, more than likely, are going to use and to cite whatever is most readily available. Furthermore, they may or may not be similarly motivated or stimulated in different environments so the work probably would not have been written somewhere else. Another problem is that similar institutions may very well emphasize different aspects of the same discipline, and in any case the intellectual, cultural, and social climate at one institution is normally markedly different from that of any other.

Generally speaking, checking bibliographies, catalogs, and lists can be helpful in evaluating a library's collection. For the most fruitful results the checklists used must be carefully selected or especially compiled to match the needs of the survey and the goals and objectives of the library or libraries being surveyed. And they should be used along with other evaluating techniques to get the broadest possible corroboration of the survey's findings.

OBTAINING USER OPINIONS

The main advantages of utilizing user opinions to evaluate the collection are that actual strengths and weaknesses of collection as well as levels and kinds of user needs can be identified; questions can be related to specific goals or objectives of the library; trends in research and changes in interests can be determined; and serious users (e.g., faculty, research workers, professional people) are likely to be expert or at least knowledgeable in the literature of their fields. The main disadvantages of using the opinions of users are that most users are likely to be passive about the library collections and so must be approached individually and polled one at a time; parts of the collection may not be covered because of restricted user interest at the time or because of lack of subject specialists in the field; experts may not agree; and the caliber of current users (and hence their demands) may be too high or too low for the intended or expected level of the collection.

Of all the ways in which to evaluate a library's collection, finding out

what its users think of it comes closest to an evaluation in terms of the library's objectives or mission. User opinion, or consumer opinion, since library users are in effect the consumers of what the library produces for use, is also the most valuable and could be the most potent feedback available to the library's selection process, particularly in public libraries or in special libraries where collections are geared more to contemporary, if not necessarily immediate, needs and demands. Several writers have discussed the pros and cons of polling library users in longer treatments of collection evaluation in general.[76]

Perhaps the major problem, however, in obtaining user opinion is that users are also human and may not always be consistent or cooperative. Furthermore, many users are not even aware of what a library should reasonably be expected to do for them, so how can they judge what is adequate? Patrons become conditioned to what they consider to be a good or a bad collection for their needs and either they return to it regularly or they stay away for good, and the library need never know.

The inadequacy of a collection depends to a large measure on what the user is willing to put up with (or without). If he becomes accustomed to shortages and gaps and to not finding works that appear on standard lists or are cited in basic bibliographies, if he becomes inured to being turned down or to being simply ignored when he makes a request for additions to the collection (perhaps because the library stayed on a depression-induced budget so long), if his literature needs have never really developed beyond what he could find readily at hand, or if he had never seen anything better, then almost any collection may be perfectly adequate.

The adequacy of a collection to support a user's needs depends on the demands the user makes of it and on how well he feels the demands are met. If his demands are moderate, then a modest collection may be quite adequate. If his demands are extensive and highly specialized, then even a strong comprehensive collection may never be adequate enough to satisfy him.[77]

Faculty and Research Workers—are sources of opinion on the levels of a library's adequacy to meet needs. It is common practice in polling faculty and research workers to use questionnaires, the shorter the better, and then, whenever possible, to interview as many of them as seems useful to corroborate, to clarify, to amplify, to resolve disagreements, to check on inconsistencies, or to reach selected nonresponders. The questionnaires may be only short lists of "levels" which may be ticked by the user to rate the adequacy of the collection to meet his

needs, or they may be lists of openended questions which must be answered specifically (e.g., missing titles, new titles, superseded works) or subjectively.

For example, in his survey of the Columbia University Libraries, Tauber asked the faculty to grade the collections at a level of (1) basic information, (2) working, (3) general research, (4) comprehensive, or (5) exhaustive.[78] In 1961, the faculty of the University of Michigan rated their library three ways: (1) in each person's own field, (2) the library he used most, and (3) the whole university library system, marking each either excellent, good, fair, poor, not ascertained, or not used.[79] Carl White was more locally specific when he asked twenty-three heads of departments of the University of Delhi to rate library resources there: (1) strong enough to support the research of professors, readers, and other teachers in the department; (2) strong enough to support the research of postgraduate students; (3) strong enough to support postgraduate instruction; (4) strong enough to support instruction of undergraduate honors students; or (5) strong enough to support instruction of undergraduate pass students.[80]

A recent survey of the Smithsonian Institution Libraries calculated a Level of Assessment score for each user based on how he rated the collection's support of his research projects: level one supplies basic information, level two covers current knowledge and important historical aspects, level three includes basic materials for independent study, and level four includes most materials for independent study.[81]

There is a striking similarity between these rating scales and the levels or degrees of subject coverage which many libraries now specify in their acquisition policy statements. The University of Illinois Library, for example, uses four categories or levels: general, instructional, comprehensive, and exhaustive research.[82] The John Crerar Library uses five degrees of collection coverage for its subject areas: supplementary reference, reference, research, comprehensive, and exhaustive.[83] Incidentally, 79 percent of the identified subject areas in the University of Illinois library are in the category of comprehensive research. About 70 percent of Crerar's subject collections are in the categories of research and comprehensive research. Each category, of course, is described more fully in the individual published statements as are the survey ratings given above.

Besides being useful to a surveyor, these faculty evaluations of a university library's collections can be very persuasive to the university's budget authorities on occasion,[84] as well as to prospective members of the faculty or research staff.

Students—are sources of opinion on the levels of adequacy to meet needs. Students' needs also are often considered in the evaluation of a library collection, although, as Williams warns, their failures to obtain what is wanted may result mostly "from poor choices of thesis topics."[85] At least one recent study investigated, among other factors, the adequacy of secondary school libraries to provide students with material for independent study projects so frequently assigned. Twenty-eight schools were studied, topics were ranked by size of supporting collections, and, since nearly half the total number of titles in the schools as a group were unique (to only one school), the implications for greater interlibrary loan activity, at least among these schools, were made quite clear.[86]

The General Public—is a source of opinions on a library's adequacy to meet needs. User studies of public libraries in Chicago, Cleveland, and New York were made in the 1930s to determine possible reasons for dissatisfaction with library service at the time, and in each study criticism of the book collection was one of the reasons most often given.[87] Recently Bone and Raines reported that on the evidence in library literature, intensive (that is continuous) "collection evaluation is not currently being practiced in public libraries" partly, perhaps, because "public libraries, unlike school and college libraries, have no accreditation standards or accrediting bodies."[88] While it is true that "dissatisfaction" with the collection is not a very substantive measure of evaluation, it is surprising that so few studies seem to have been made recently to find out whether public library collections are still unsatisfactory, or whether they are now reasonably adequate to meet the needs of their users.

Bone and Raines cite some important recent surveys of public libraries—Chicago 1966, Toronto 1967, Memphis 1967, Baltimore 1968—and suggest that the disappointment and the inadequacies are still there. They suggest further that part of the reason for this (apparently continuing) state of affairs is the public librarian who (1) minimally serves his community's more serious (and more numerous) fraction of potential users, (2) has no skills himself to develop collections in depth, and (3) has no academic "faculties with whom to interact" or from whom he could get advice on building collections.[89]

Merritt recommends that the "presumed 'experts,' the users of the library," be asked about the adequacy of the public library's collection, too, just as with academic library collection evaluations. He admits they are not very vocal about their opinions on collection adequacy, but he

feels that "they need to be asked."[90] Public librarians have always seemed to be most alert to user requests and to trends in circulation, but not many of them appear to have tapped their users' opinions on the adequacy of the collection to meet users' needs.

Librarians—can be questioned as to the adequacy of their collections. The best in-house evaluators of the collection, according to one recent writer, are the reference librarians. They can tell "what is sufficient, what is adequate" for *this* library, and they should be in touch with what the public of the particular library wants.[91] Reference librarians, of course, are usually at least interviewed during a library survey and they, more often than not, are the ones who check the lists, catalogs, and bibliographies discussed earlier.

DIRECT OBSERVATION

The main advantages of direct observation are that it is practical and immediately effective. The main disadvantages are that it requires a subject or materials expert and is not very scientific. To the surveyor who knows the literature, an examination of the bookshelves will quickly reveal the size, the scope, the depth, and the significance of the collection. He can tell at once if duplicate copies or superseded editions inflate the collection, and he can tell if journal runs are substantial and complete. He can estimate the proportions of various parts of the collection and the recency of the material. Later checking of circulation files can verify or revise any preliminary judgments.

To the surveyor who knows something about stock maintenance, an examination of the shelves will show at once the condition of the collection, the proportion that is torn or falling apart, the journals that have hard use or little use, the works that should be discarded or rebound, and the general atmosphere of the whole stack area.

Empty shelves may mean that all books in that class are out and that there are no books left for anyone else, so the acquisition policy should be looked into. Full shelves of unused books may mean that they have never been called for, so again the acquisition policy should be looked into. As Williams says, "Anything more depends entirely upon the experience of the surveyor and the acuity of his perceptions."[92]

APPLYING STANDARDS

The main advantages of applying standards are that they can be related to the library's and its parent institution's goals and objectives; they are generally widely accepted, authoritative, and persuasive in

getting help or support; and they are especially effective when promulgated by accrediting agencies. The main disadvantages are that goals and objectives as stated may not be amenable to objective evaluation; they are not always easy to interpret; they require a high degree of professional knowledge and judgment; experts may disagree about them and any decision affecting accreditation is necessarily a serious matter.

Two recent publications effectively cover many aspects of standards for libraries. The earlier one (March 1971) is a select bibliography of 138 references to literature on elements, criteria, and application of library standards, very broadly defined, published between 1933 (the Raney University of Chicago Library survey) and January 1970 (the Downs and Heussman article on standards for university libraries).[93]

The other one (October 1972) is an entire issue of *Library Trends*[94] with fourteen articles on library standards for all types of libraries with the most attention being paid to those developed by professional library associations or government library agencies and by other professional associations if the standards pertain specifically to libraries. Educational standards of the six regional accrediting associations are mentioned in the article on university libraries, and educational standards of relevant professional associations are discussed in the article on health care institutions. A much earlier work (1958) already referred to[65] covers both the regional and the professional associations comprehensively, but it is now of only historical interest.

One of the most significant (and still quite controversial) changes in standards since the 1940s has been the almost universal stress on quality rather than on quantity as the decisive factor in making evaluations; quality, as has been mentioned, is not easy to get at. Another has been a similar emphasis on institutional goals and objectives as the frame of reference within which the standards are to be applied, and goals and objectives are also difficult to pin down. Evaluation methods or techniques may or may not be recommended in the standards being applied, or in the interpretation or guidelines accompanying them. In any case, in evaluating the library's collection the choice of the visiting team or the surveyor most likely would be one or a combination of the several methods already described.

In this paper it is possible to discuss only a few of the existing standards and, specifically, only those parts of them that may or must be applied in evaluating library collections. Since many have been discussed or at least touched on recently elsewhere,[94] only the standards for specialized education that illustrate different approaches to

collection evaluation will be presented here.

There are thirty-two associations and agencies recognized by the U.S. Commissioner of Education for their specialized accreditation of schools or programs listed in the 1971 (first) edition of *Accredited Postsecondary Institutions and Programs*.[95] All have published standards or criteria for accreditation of their respective educational programs, but the sections in the standards devoted to libraries vary from mere mention, perhaps under "facilities," to several paragraphs under a separate heading. There seems to be no relationship between the length of the statement on libraries and the importance of libraries in the field of study. Typical, but a little longer than most, is this statement from the *Standards for Accreditation 1972* of the American Library Association: "The general and special collections, staff, and services of the institutional library should be adequate to meet the general educational purposes and needs of the library school. The collection of materials in the field of library science should be adequate in scope, size, content, and availability to support the goals and objectives of the school."[96] "An adequate collection of multimedia resources" is mentioned two paragraphs later.

Below are the portions of several accreditation standards or criteria manuals that cover library collections:

Art Education

> Library. The library should adequately support the undergraduate program with no less than 5,000 volumes on art and related subjects, plus at least 25 periodicals and should be staffed by an adequate number of professionally qualified personnel. The slide collection should provide at least 10,000 items. These figures apply to institutions with relatively small enrollments. Larger schools or schools with more complex offerings should have proportionally larger library collections. If a graduate program is offered, the library collections should be substantially in excess of the minima stated above.[97]

Business Education

> Library. 1. The library facilities of the institution shall serve the needs of its educational program. Audio and audiovisual teaching devices and materials are to be considered in the evaluation of the library. 2. Every institution should have available and easily accessible such standard reference works as an unabridged dictionary, an up-to-date set of encyclopedia, a current world almanac, and recent

editions of handbooks appropriate to the curricula. Resource and reference material adequate to the needs of the faculty should be available. 3. The variety of volumes and periodicals readily available to the students and faculty, recency of publication, appropriateness, and usefulness to the program are major considerations.[98]

Chemical Education

Library. The institution should provide within or near the chemistry building convenient access to at least twenty current chemistry periodicals with good back runs, including some foreign language acquisitions. If *Beilstein* and, particularly, *Chemical Abstracts* are not taken, the Committee will seek concrete evidence of the ability of the institution to provide students with frequent experience in gaining entrance to the chemical literature. Should the chief holdings in chemistry be housed in the main library, important reference works and some current journals should be kept in a departmental reading room.[99]

Law Education

Chapter VI. Library. *601*. The law school shall maintain and administer a library adequate for its program. *602*. (a) The law school library shall contain: (i) all publications listed in Library Schedule A, attached as Annex II, (ii) those other materials that are reasonably necessary for the proper conduct of its educational program, (iii) all publications listed on Library Schedule B, attached as Annex III, except those that are readily accessible to and available for use by students and faculty in another library facility. (b) The Council is delegated the authority to revise the Library Schedules from time to time. *603*. (a) All materials shall be current with respect to continuations, supplements, and replacements. (b) All sets of materials shall be complete and unbroken except when early volumes of a set are either unavailable or are available only at an excessive price. A set is not complete unless it includes all supporting materials, including indices, desk books, digests, finding tools, and citators published as part of the set or generally available for use with the set. (c) All periodicals, except for the current year, shall be permanently bound. (d) If the library contains any materials on microfilm, tape, or similar form, it shall provide the necessary viewing and listening equipment. (e) The library shall contain additional sets of more commonly used materials whenever necessary for efficient use by the faculty and students. (f) The library shall be kept

current with respect to new publications and new forms of publications.[100]

Medical Education

A well maintained and catalogued library, sufficient in size and breadth to support the educational programs that are operated by the institution, is essential to a medical school. The library should receive the leading medical periodicals, the current numbers of which should be readily accessible. The library or other learning resource should also be equipped to allow students to gain experience with newer methods of receiving information as well as with self instructional devices. A professional library staff should supervise the development and operation of the library.[101]

Medical Laboratory Education

g) The Library. The library of the school shall serve the needs of its educational program. The size of the library should be consistent with the enrollment and could vary accordingly. Audio-visual teaching devices and materials will be considered in the evaluation of the library. Medical laboratory text books, periodicals, pamphlets, etc., should be consistent with the courses and procedures in use by the institution and should be easily accessible. Recency of publication is of utmost importance. Every school shall have available reference books in the various subjects and specialities of medical laboratory technology. Although the number and variety of volumes and periodicals is important, appropriateness, availability, and usefulness to the program are the major considerations. Subject to variations in the various educational programs and institutions, minimum requirements should include: Adequate text books on medical laboratory techniques; Adequate books on medical laboratory specialties; Adequate weekly or monthly periodicals; Various state and national journals dealing with medical laboratory techniques. Appropriate audio-visual equipment is available or there is access to this material. [102]

Optometric Education

VII. Library A. Resources. The resources of the library should be adequate to meet the instructional needs of the educational program. The actual number of holdings is not the sole criterion of adequacy. Judgment will be based on the relationship between the nature and extent of the holdings and the curriculum.

1. *Books and Other Reference Materials* The number of standard works of reference in relation to the fields of instruction and to general knowledge as well as the number of dictionaries, encyclopedias, and other reference sources must be adequate. Each section must be kept current. 2. *Periodicals* An adequate number of periodicals which are applicable to the curriculum should be maintained. Selected periodicals should be bound and indexed annually. 3. *Audio-Visual Materials* Suitable audiovisual library facilities should be developed for use by individual students, for use in classrooms, laboratories and clinics. These instructional aids must be readily available and their use encouraged.[103]

Pharmaceutical Education

D. *Library* . . . .The responsibilities of the librarian include: (1) the development of adequate holdings in suitable current reference books and periodicals and a working procedure for making additions to the collection as suggested by the faculty.[104]

Social Work Education

Library . .5200. Library facilities . .5210. The book, periodical, and reference collection shall support—by quality, size, nature, and appropriate duplication of holdings—the instructional and research programs of the school and be assembled in such a way as to be readily accessible for student use . .5211. The holdings shall include the considerable body of fugitive material which is essential to social work education . .5212. If a school offers post-master's programs of study, the library holdings of the university shall include, in addition to those necessary for the master's degree program, a wide range of background material, a wide range of holdings suitable for research purposes, and a strong collection in the social and behavioral sciences and the humanities . .5213.[105]

(The Council on Social Work Education uses the ACRL's *Guide to Methods of Library Evaluation* in its accreditation procedures.) [106]

Speech Pathology and Audiology Education

2. The library facilities of the institution must include an adequate variety and number of books, periodicals, and other reference materials in speech pathology, in audiology, and in related fields.[107]

(The "guidelines" which accompany the standards state: "Books and journals should reflect the variety and depth of areas needed for clinical certification and should represent both past and present con-

tributions in speech and hearing. It is difficult to arrive at a 'number' that is meaningful because of the breadth of material which may be viewed as pertinent to our field. It is sometimes possible to get a cross-section of the library facilities (and usage) by a study of the students' research products, the sources used in the studies, and the bibliographies and sources of readings actually used in coursework.")[108]

Teacher Education–Basic Programs

4.1 *Library* Standard: The library is adequate to support the instruction, research, and services pertinent to each teacher education program. 4.2 *Materials and Instructional Media Center* Standard: A materials and instructional media center for teacher education is maintained either as a part of the library, or as one or more separate units, and is adequate to support the teacher education programs.[109]

Teacher Education–Advanced Programs

G-4.1 *Library* Standard: The library provides resources that are adequate to support instruction, independent study, and research required for each advanced program.[110]

Illustrative questions which accompany the standards include these:

Standard 4.1 *Library:* What evidence shows that the library collection includes: a. Standard and contemporary holdings in education (books, microfilms, microfiche copies, etc)? b. Standard periodicals in education? c. Such additional specialized books, periodicals, and other resources needed to support each teacher education program? What evidence shows that the institution, in maintaining and improving the quality of its library holdings in teacher education, seriously considers the recommendations of: a. Faculty? b. Appropriate national professional organizations and learned societies? c. A nationally recognized list (or lists) of books and periodicals? [Questions relevant to the materials and instructional media center and to the library in graduate programs are also included.][111]

Theological Education–General

V. *Library* B. Resources 2. An adequate portion of the seminary's educational and general income shall be devoted to the support of the library program. Evaluation of the adequacy of this support will be made by comparing support, holdings, and resources

of an institution or cluster with those of other institutions or clusters having similar programs and comparable situations.[112]

Theological Education—Master of Divinity

III. *Resource Requirements* C. Aids to learning. The program shall provide ready access to sufficient books, periodicals, and media materials to facilitate the achievement of its goals and objectives (see section on Library, pp. 12-14).[113]

Theological Education–Doctor of Education

III. *Resource Requirements* B. Library. The program should have ready access to sufficient material in religious education, education, related behavioral and social sciences, and theological disciplines to enable it to achieve its goals and objectives. [Specialized doctorate programs require more substantial resources and research collections in each field of study.] [114]

Of special interest in the accreditation process of the American Association of Theological Schools is a set of four questionnaires on library matters sent out early enough to have results available to the accrediting team at least two weeks before the actual visit. Two of these deal more specifically with the collection: one is a statistical review and the other is an overall library program evaluation (including a question on how well the collection supports the curriculum and research) which is to be filled out by members of the library committee, by students, and by faculty.

The foregoing selections of standards relating to library collection evaluation run the gamut from complete permissiveness to almost complete restrictiveness as to numbers of volumes and as to specific titles of books and journals, with the only common denominator being adequate support of the educational program. The principal area of controversy, referred to earlier, is the deliberate lack of specificity in both numbers and titles all through most of the standards. Controversy arises also around the meaning of "adequate support" and the questions of how and by whom it is determined. Various fund-granting agencies of the federal government have begun to insist on certain prerequisites before awarding grants—prerequisites which may be specific as to size or as to policy—and these tend to take on the authoritativeness of standards if they have not been already incorporated into other standards.

Not long ago the director of the National Council for Accreditation of Teacher Education discussed various professional problems related

to the accreditation process and raised a number of questions about the library part of existing standards. Unfortunately, he concludes, no one has answers to them, so "all the parties concerned turn to the basic folklore, to views which past practice, reason, and discussion have led us all to accept. . . . And there are few complaints. If no one knows much better, even though there is a vague suspicion that all is not right, everyone accepts the common yardsticks." [115] NCATE's own standards have been examined rather critically, too.[116]

The final two collection evaluation methods to be discussed take into consideration more than just the one library's collection, but in each case the adequacy of the collection being studied determines whether any further steps are to be taken (i.e., whether other libraries will be visited) in order to satisfy the needs of the particular library's users. The two will be grouped together since they are somewhat similar in this "reaching out" respect.

RATING TOTAL (INTERNAL + EXTERNAL) RESOURCE ADEQUACY

The main advantages of rating total adequacy include that it is realistic; it uses quantitative methods; it recognizes interdependence of library collections; it encourages interlibrary cooperation; and it demonstrates the value of library networks or systems. The main disadvantages are that it is dependent on knowledge of what resources are available where; it may be difficult to establish an adequate test sample; and it is relatively complicated so that it may be more susceptible to human error.

All the evaluation methods discussed thus far have assumed a test-library's collection to be an independent, self-contained whole. However, it has become more and more obvious that no library is, can be, or, indeed, should be, completely self-sufficient, so it seems reasonable that other resources which are readily available to augment or supplement a given library's own resources should also be considered in evaluating the adequacy or quality of that library's collection. What is being rated here, then, is the totality of the resources available to satisfy a library user's needs efficiently and effectively. In some cases this may include all the libraries in a city, in a system or network, or in a country, but speed, efficiency, or effectiveness (or all three) may suffer in the process. A total rating of resources adequacy would include the following aspects.

A Document Delivery Capability—should be able to satisfy a request for a specific document. The evaluation is based on the speeds required to deliver each of a test sample of 300 documents from a library's own

collection or from other libraries, expressed as an average "mean speed" on a scale from 1 to 5 where 1 signifies that all test items are found on the shelf in the test library and 5 signifies that the library owns none of the test items and borrowing them would require more than a week.[117] To arrive at a "Capability Index" this mean speed is fed into a simple mathematical formula:

$$\text{Capability Index} = \frac{5 - \text{Mean speed}}{4} \times 100.$$

The Capability Index becomes 100 when all test items are found on the shelf and it becomes 0 when none of the test items would be obtainable in a week or less.

Results of employing the standardized Document Delivery Tests (described at some length in the Orr, *et al.* paper cited previously) on ninety-two medical school libraries and on fifteen major biomedical resource libraries were reported in another long article in July 1972.[118] An interesting mathematical model is also developed, or reformulated from the earlier report, in which the real or virtual capability of a library, as seen by its users, equals the algebraic sum of its basic capability afforded by its holdings minus the combined losses attributable to use of the collection, processing activities, relative inaccessibity of items, and "housekeeping problems" plus the gain realized by coupling with other resources through interlibrary borrowing. The authors say that for a particular library or group of libraries empirical values for each of the variables can be calculated easily from the capability measures and the status statistics.[119] And predictions of basic capability can be made from collection size using regression equations derived for the purpose.

Another spin-off from the research project which led to the development of the Document Delivery Tests and the Capability Index mentioned above is a bibliography of 178 items published between 1915 and mid-1968 dealing with objective measurement of library services and operations that could be useful to biomedical librarians.[120]

Relative Use of Several Libraries—refers to the regular use of other libraries as a symptom of the adequacy of the primary library (i.e., the one being evaluated). As pointed out above, users soon learn the strengths and weaknesses of a library's collection for their own needs, and they adapt or go elsewhere. So, a record of few unfilled requests may mean either that the library does have almost everything its users need or that the library is being bypassed except for the needs its users feel it probably can fill.[121]

Elaine Sloane, in her study of the Smithsonian Institution Libraries,[81] correlated user level-of-assessment scores for those collections with the total numbers of libraries these same curators used within and without the Smithsonian's library system. She found that the more "other" libraries they used, the lower was their assessment of the Smithsonian's collections; but the more libraries used within the system, the higher the assessment.[122] She also found, not too surprisingly perhaps, that historians used more libraries outside the system and fewer inside than natural scientists did, evidence of the historians' more diversified interests.[123]

Another recent study reported on the use of 17 libraries in the Detroit area by 129 medical students.[124] Size, services offered, and distance from the primary work site were not as significant in explaining use of individual libraries as were relevant resources and mission of the particular parent institution. The primary library (that of the medical school) has more biomedical resources than any other library in the area so it was most used, even though certain other libraries were much larger or more conveniently located. One related result of this study was that the administration may decide to help support some of the other libraries that are heavily used by medical school students, or it may decide to improve the medical library's services or resources its students are going elsewhere to get.

Resources of a given library are still primary and basic to the needs of that library's users, and so they must be as adequately developed as possible to meet those needs. But cooperative arrangements of various kinds are beginning to take some of the pressure off the local library and, at the same time, to expand its resources and its horizons to the benefit of its local users. The totality of resources available through the local library, therefore, ought to be the "collection" that is evaluated as to its ability to satisfy the needs of the users efficiently, effectively, and expeditiously—in a word, adequately.

Selection Methods and Collection Evaluation

Since a library's collection is the product of the library's acquisition program including, especially, its selection activities, it will be in order to take a brief look at some of the more common selection methods presently in vogue to see how they relate to the process of evaluating the collection.

Materials are selected for a library to satisfy the needs of the library's users in accordance with the library's current acquisition policy which is established and kept up to date within the framework of the library's

stated goals and objectives. The resulting library collection is evaluated by finding out how well it does, in fact, satisfy those needs using the same frame of reference used in the selection process: if selection has been well done, the collection will rate high.

The selection process in public libraries has a long history and it has successfully adapted itself to changes in philosophy and method over the years, largely, no doubt, because selection has always been in the hands of public service librarians who have been in a position to know and to react quickly to the changing needs and moods of the community.[125] Such discussion as there has been on public library collection building has centered mostly around disagreement concerning the role of public libraries (e.g., educational vs. popular vs. all-things-to-all-people), around censorship, and, more recently, around developments such as the "Greenaway Plan" and the various cooperative systems and other projects now attracting attention.[126]

Part of the difficulty in evaluating a public library's collection has been the uncertainty or even ignorance on the part of its public as to what it should be and do in the first place, and part has been the inexperience of its public in articulating what its needs and interests really are. These conditions reflect inadequate public relations or inadequately stated goals and objectives and so to that extent relate to selection. Continuous evaluation, at least to some degree, seems to be common in well-run, smaller public libraries and seems to have a relatively speedy effect on acquisitions, possibly because good public librarians are (and must be) close—and sensitive—to public opinion, which is, as suggested above, a good barometer of the adequacy of a library's collection.

Special librarians also have to be both close and sensitive to user opinion even more than good public librarians, or they may be out of a job. Consequently, goals and objectives, user needs, selection, resources, and interlibrary relations are all analyzed regularly in all well-run special libraries.

Selection in school libraries very often means choosing from prescribed or recommended buying lists, so evaluating the libraries by checking the same lists hardly seems useful or proper. Many school librarians, of course, do their own selection using current selection aids, frequently with the help of the faculty. A recent evaluation of book selection processes for elementary school libraries based in large part on an evaluation of the respective collections could not detect much difference in the quality of the collections built up in either way, selecting from authorized buying lists or selection from traditional

book reviewing aids.[127] The qualifications of the persons doing the selection (or preparing the buying lists) has a lot to do with it. An earlier survey of research in school librarianship covering some fifty doctoral dissertations completed between 1950 and 1967[128] noted that among the general conclusions reached by the whole group of doctoral studies reviewed, the first was that collections assembled or selected by persons not qualified in book selection are inadequate,[129] and noted also that a number of the dissertations dealing with state or national school library standards suggested that they be revised.[130]

Selection of materials for academic libraries traditionally has been the responsibility of the respective faculties, but during the past forty years or so selection more and more has become the responsibility of public service librarians, subject literature specialists, and bibliographers in the academic libraries themselves.[131] More critical evaluations of library resources had questioned the overall effectiveness of faculty selection in building balanced collections, and many faculty members were getting too busy to bother. Of course, many scholars still take active interest in building research collections,[132] and most academic librarians encourage and welcome faculty participation in the selection process, but the final responsibility for selection is the library's.

Maybe it was World War II that stimulated greater academic interest in foreign lands and people, caused the proliferation of area study programs, and promoted the development of comprehensive cooperative acquisition projects such as the Farmington Plan[133] (now mostly phased out), the PL-480 foreign acquisitions program,[134] the Latin American Cooperative Acquisitions Program,[135] and the National Program for Acquisitions and Cataloging.[136] And maybe it was the sudden awareness of so many more U.S. publications, the providential availability of so much more money, and the prestigious necessity of keeping up with so many more traditional rivals that led to the multiplicity of blanket order and approval plans.[137]

In any case, during the past twenty-five years the acquisition programs of most academic libraries have expanded very rapidly, but, as far as can be detected from the literature, they have been surprisingly uncritically monitored except by a few admonishers who deplored the seemingly indiscriminate "selection" involved in building library collections by such means,[138] and by a number of writers whose appraisals seem more instinctive than objective. It simply is difficult, apparently, to devise a suitable cause-and-effect test that will evaluate mass-action acquisitions programs qualitatively rather than quantitatively.

The Past as Prologue

Among the concepts and ideas that have appeared and reappeared in this review of the literature on evaluation of library collections, four seem to have the most far-reaching implications for the development and the evaluation of all types of libraries:

1. The emphasis on library goals and objectives as the foundation for a library's selection or acquisition policy, and as the framework within which the library's collection is to be evaluated.
2. The stress on quality and on user needs rather than on quantity and on basic lists alone as the decisive factors in building a collection and in evaluating it.
3. The realization that no library can ever be completely self-sufficient, and that increased interlibrary cooperation may be the only possible solution to the growing problem of providing library collections adquate to meet the needs of library users, wherever they may be.
4. The virtual necessity of having competent professional librarians in such strategic spots as selection and public service, to insure proper development and use of the library's collection.

Goals and objectives must be determined carefully, updated regularly, described clearly, and stated in terms that can be evaluated objectively.

Quality for a particular collection depends on user needs and it may change as user needs change, so it is essential that users are polled periodically as to their needs and as to their opinions on how well their needs are being met.

Interlibrary cooperation of all kinds must be encouraged and newer areas of possible cooperation must be explored, not only among similar libraries but also among libraries of different types and sizes. The library user's major concern is the totality of available resources upon which he draws and not just one library's collection. It is this totality that should therefore be evaluated.

Competent professional librarians make the difference between a general collection and a dynamic, well-used, highly regarded library. They are the links between the community's needs and the library's collection on one side, and between the library's collection and a specific user's needs on the other. They interpret the community to the library through selection and they interpret the library to the members of the community through public service. The proper evaluation of a library's collection must, therefore, take into consideration the pres-

ence or the absence of competent librarians in the important areas of selection and public service.

Goals and objectives, quality, interlibrary cooperation, the needs of the community, and competent librarians all must be considered in evaluating a library's collection.

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Evaluation of Processing Services

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FOR THE PURPOSES of this discussion, processing services are defined as including acquisitions, cataloging and classification, and the physical preparation and servicing of library materials for use. Like all other library activities, processing services can only be evaluated in any real sense in terms of their efficiency, economy, and speed in contributing to the ability of the library to meet the needs of its present and potential clienteles. In practice, however, we make the basic assumption that acquiring materials, providing access to their intellectual content for clientele and staff, and providing for their physical location and use are desirable means to these ends.

What we try to determine by evaluation of these services, then, is whether we are acquiring rapidly and at reasonable cost those materials which have been determined to be most useful; whether we are providing the kinds of access to their intellectual content required in the best possible way within a reasonable balance of costs; and whether we are similarly meeting the requirements for physical access to and use of those and other materials.

More and more we have come to the realization that to serve present and potential clienteles properly we need to make our concept of the required services and the means for accomplishing them—and, hence, our techniques for their evaluation—go beyond the individual library.

The concepts of networks and networking now emerging make greater demands upon the technical or processing services than ever before if library reader or user services are to be provided the physical materials and the access to them they require.

In the narrow sense, there are a number of ways of evaluating—and improving—the performance of specific processing procedures deriving from operations research, scientific management, accounting, systems analysis, and other business, management, and administrative techniques. It is important to note that these are general techniques

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applicable to many types of operations and are by no means peculiarly library-oriented. Indeed, the most effective descriptions and discussions of such techniques are more usually to be found outside of the literature of librarianship proper, although the literature does contain some excellent descriptions of their application to particular library problems. These general techniques are certainly of very great importance as applied to library operations. This is especially true of processing services which may be largely clerical in nature, like much of acquisitions and preparation work; or to areas which, like much of cataloging, may have a high proportion of the intellectual effort they require either centralized or highly systematized so that within a given library most parts of the task may be reduced to clerical or subprofessional routine.

These evaluative techniques from outside librarianship properly focus upon the specifics of job analysis and task performance. Valuable and important as they are, however, they will not be the approach to evaluation and improvement of processing services discussed here. Appreciation of them and their application in libraries seems well established and growing in effectiveness.

Nor will this article follow a basic pattern quite customary for *Library Trends*. That is, it is not intended to be a picture of the current state-of-the-art derived from a careful and exhaustive survey of the literature of the evaluation of processing services. Currently it seems appropriate to suggest a somewhat different approach to the evaluation of processing services which is intended to be somewhat broader in scope and to supplement, rather than supplant, either the use of general management techniques for task and performance evaluation or intensive study of the relatively recent literature of the technical services for evaluative techniques. This is so because it seems possible now to discern through—and perhaps because of—the stress and travail which have affected us over the past few years, a kind of consolidation or consensus of informed professional opinion about some aspects of librarianship, particularly about the processing services as defined above, both in broad matters and in many matters of detail which have broad implications.

Many of these ideas, concepts or procedures on which there is such consensus are not new, of course. What is new is a kind of professional awareness and sensitivity to the everchanging role of the library and perhaps a sense of wider professional responsibility.

Thus it would seem possible to take a wider view of evaluation than usual in this article. It would seem possible to take the position that

there are at present certain concepts, techniques, methodologies, and goals for the processing services on which there is truly substantial informed professional agreement. And it would now seem possible to suggest that a basic technique for the evaluation of processing services in libraries would be to determine areas in which there is such a broad professional consensus as to methods, procedures, concepts, and goals and to examine the extent to which a given library is applying them.

This technique has its dangers, of course, as all such techniques do. Not only may the received, informed professional opinion of one generation be seen as fallacious by the next; but also in applying such a method it is imperative to keep in mind such clichés as "circumstances alter cases." Clichés or truisms may be deadly accurate upon occasion.

The proposed technique also has its advantages, however. It by far is easier and cheaper to apply than the sophisticated detailed evaluative methods derived from other disciplines, and it is more likely to result in gross improvements rather than in relatively minor ones. Ralph R. Shaw enjoyed pointing out that the way to go was to seek first those areas where the most improvement could be achieved at the least cost.

Indeed, many of the most sophisticated techniques from other disciplines may not really be very suitable for application in just those areas where libraries are on the verge of the greatest possible advances in services, if the proper evaluative techniques are applied. These techniques perhaps encourage a view of the trees rather than of the forest. For some circumstances, libraries may have more need for a crowbar to tear down dilapidated structures than of tweezers for delicate repair. Many of the more sophisticated techniques, too, are relatively difficult to apply—at least within the very libraries which may be most in need of improvement. It is easier to wield the crowbar than the tweezers.

The smaller library cannot do time-and-motion studies even of the methodology of one procedure, let alone of comparative methodologies and types of equipment. Often, because of the pressure of work and the fact that each staff member must carry out a wide variety of tasks (all of the tasks, obviously, in a one-person library) it is not possible even to keep an accurate record of the manhours spent on given tasks.

Even for these libraries, however, it is possible to have—or to gain, through visits, meetings, the literature, or more formal professional education—an awareness of the broad and growing areas where consensus exists, and the means to use these as a self-evaluative standard. There is reason, as we shall see, to believe that this technique can be just as valuable to the larger libraries, which can also have the further

arsenal of sophisticated methodologies at their disposal.

The procedures, methods, or concepts on whose effectiveness and desirability there is informed professional consensus and which may be used as a means of evaluation of processing services are neither authoritarian pronouncements, nor *obiter dicta*, nor everlasting truths. Librarians are, by and large, an interested, progressively disputatious, and self-expressive lot. There is probably no substantive concept or technical question involving processing services which is not the subject of debate in or out of the literature and on which Shavian or Gore-like thunder has not been heard. Consider, for example, recent discussion of subject headings as assigned by the Library of Congress, or of the International Standard Bibliographic Description (ISBD).

Indeed, perhaps one flaw in the literature is that it tends to take the existence of massive informed professional consensus on some matters too much for granted, at least in the journal literature, while much of the monographic literature may reflect outmoded practice. Then, too, the matters surrounding consensus are mutable, rapidly developing, and always contingent, and the journal literature may reflect the contingencies even as it largely assumes the existence of the consensus.

It would seem to this viewer of the contemporary scene that informed consensus exists in such broad and basic areas affecting evaluation of processing services as: standardization of bibliographic and cataloging practice; networking—access, interloan, acquisitions; the desirability of larger units of service for processing services; acquisitions, cataloging, and processing procedures and policies for nonprint or nonbook media; and utilization of processing services personnel. Broad and basic as these areas are, the consensus in regard to many aspects of them extends really to matters of quite explicit detail. And, while the focus of the areas of agreement is, as it should be, upon increasing quality and extent of services to users and to library staff serving users, there is involved agreement upon methodologies, that these methodologies are conceived in terms of economies of operation, and that these methodologies are suitable as touchstones for evaluation.

By examining a few examples, perhaps it can be determined whether consensus exists as to a particular concept or practice, and whether evaluation of practice in a particular library in terms of that consensus is likely to prove economic to the library and valuable to its clienteles. For example:

1. The use of standardized, externally provided catalog cards or information without change is significantly cheaper and better than

either original cataloging and classification or the attempt to review, edit, or adapt externally provided copy or cards. A corollary to this might be that the statement is true even if it involves a basic change in a library's cataloging policy, or classification, or both.

There are, of course, exceptions to this generalization and problems for users which might result from its application in some cases. For example, extremely brief in-house cataloging of fiction may be both cheaper and faster in some school and public library situations. Some of the subject heading practices of the Library of Congress have been outdated or severely criticized for other reasons, although this situation is rapidly improving. Cataloging coverage of some forms of materials or of some subject areas is slow, or insufficient, or both.

Nonetheless, not only does the generalization seem acceptable as representing a consensus, but it would appear likely that a majority of the general libraries (as opposed to those with narrowly specialized subject interests) not now using outside cards or copy are those which would encounter comparatively few problems in doing so. This is particularly true since recent enormous improvements in LC coverage, greatly broadened prompt publication of cataloging information in various forms, and the substantial and growing acceptance of Cataloging in Publication. Progress in all of these areas, as well as LC's recent and excellent changes in covering juvenile books (of special importance to school and public libraries), will undoubtedly be even more rapid as the sources of cataloging information (especially LC) receive more and more positive support in their continuing efforts to raise quality and coverage.

Perhaps too much space has been devoted to this first example, but all of the examples to be discussed here are but samples by which librarians may chose their own consensuses to use for evaluative purposes for their own processing services. It may be worthwhile to mention that none of the recent rather vigorous informed professional criticism of, e.g., LC subject heading practice or of the ISBD has suggested or implied that there is any alternative to using LC cataloging copy. Rather, it has been suggesting change and improvement of the central service, while assuming the consensus discussed above.

2. For school and public libraries in particular, and for many other types of libraries as well, centralized or cooperative acquisitions, cataloging, and processing, or the use of commercial cataloging and processing, are cheaper and better than the alternative of trying to carry out these tasks on the individual small library level.

In recent years libraries have made great progress toward this type

of centralization. It is probably safe to say, however, that even where centralization of these functions has been carried out there is still far too much uneconomic individual tailoring of the product in ways which do not really contribute to serving the user. It is almost certainly also valid that consolidation of acquisitions, cataloging, and processing from individual school and public libraries into larger units which are not only more economic but also more capable of maintaining standards of quality would constitute, for librarianship as a whole, a truly giant step forward.

In recent years, libraries seem (rather belatedly) to have suddenly discovered that the kind of administrative centralization which removes a library from its constituency and from community policy formation is not a good thing. It is significant, however, that even in those areas in which it was most evident that community and library identification had been most neglected and was consequently rather vigorously restored, all parties have usually taken it for granted that processing services decentralization is not required to assuse community participation or control at the local level and by the community to be served. Indeed, centralization of general processing services may make it possible for local staff to provide tailored information access to meet community needs which would not be possible if every item is locally cataloged, classified, and prepared for the shelves.

3. For many years now, as reflected in various library standards and in the literature generally, there has been substantial consensus that the acquisition of materials to meet user needs should not be limited by form of publication. Indeed, the literature has laid increasing stress upon the need to acquire, provide proper bibliographic access, and proper processing and servicing facilities for films, filmstrips, audio and video tapes, and other nonprint media for an increasingly media-conscious and media-using culture.

It is worth emphasizing that here the consensus is, and has been, that libraries should acquire needed materials regardless of medium within any given budget for materials, not that they wait for a specific budget increase for the purpose of adding another form of publication to the collections. While this consensus certainly does not mean that we ignore the relative cost effectiveness to users of any form of publication, it would certainly imply that almost all libraries (with some school libraries, in particular, as most honorable exceptions) should have far more quantity and variety of nonprint media than is in fact the case. Three film strips do not show an audiovisual awareness. While important strides are being made in this area, especially in bibliographic and

cataloging control, there is so marked a difference between the consensus and the holdings of libraries that it is evident that there is a long way to go, as the crudest of statistical surveys can indicate.

Difficulties up until now have probably arisen, at least partially, because of the lack of adequate listing and reviewing of materials, and of problems in obtaining cataloging information. Even if librarians and the Association for Educational Communications and Technology differ on minor aspects of cataloging, they have come closer and closer together. It is also clear that the bibliographic and cataloging services, represented by LC and the R.R. Bowker Company, in particular, have been willing to lead the way, and that with more support from the field these deficiencies will no longer exist to serve as excuses, rather than reasons, for librarianship matching word to deed. In this case the handwriting is on the wall—go media, or lose out. It is hoped librarians will match action to consensus.

For at least one nonbook (but not exactly nonprint) medium it is evident that the larger research libraries are now totally committed because there was no other way to go. Both with the growth of technological capability and the growth of libraries, microforms have become of tremendous importance. There is evidence to support the conclusion that larger research libraries are now acquiring more than one-third of the titles they add to their collections each year in microform. There is also abundant evidence to support the conclusion that, because of the historical pattern of growth of the production and collecting of microforms, many libraries provide intellectual access to these holdings far inferior to that provided for printed books. The situation is already a difficult one, but projection of existing trends coupled with the growth rate of microform items in major collections would indicate a difficult future indeed for the user. Luckily, growing awareness of the problem—and of the consensus in regard to bibliographic control of these items—seems to be leading to productive solutions as some of the best of library researchers and administrators have recently tackled the problems involved. It would be a happy circumstance if one could be so sanguine about some print forms, like government documents, where there is similar consensus but less indication of positive action—even though the Government Printing Office has recently sent out a questionnaire *asking* if it should adopt Cataloging-in-Publication.

4. A fourth matter upon which the profession in general has agreed with continuing and growing emphasis and which has a special application to the processing services concerns utilization of personnel.

Crudely, it may be concluded that it is wise to avoid the use of professionally educated staff to carry out clerical or subprofessional tasks such as typing, filing, searching, or comparing LC cards or copy to books.

Failure to use personnel wisely is occasioned, of course, by many factors, many of which are the result of historical patterns of library growth and administration. Small service units which could profitably combine into larger administrative or cooperative units often do not have sufficient staff to permit specialization, so that administrative patterns have forced limitations on the economic utilization of personnel. This pattern is changing, but greater recognition of our basic professional agreements on both personnel utilization and larger units of service could help accelerate the trend.

The use of professionally trained staff for tasks for which professional training is not required is, unfortunately not, limited to small administrative units, although there is no lack of precedent to indicate what might be accomplished by a more proper allocation of tasks. Proper use of staff is not simply a matter of economy—it is also, and quite importantly, a matter of morale, and a matter of morale for clerical and subprofessional staff as well as for librarians. Here, too, it is possible to discern cheering trends arising, in large part from a new awareness of past discrimination in library employment and promotion, and a growing determination to rectify this situation which has led to overall examination of staffing patterns. Here, too, consensus on mutually related and compatible goals helps to provide incentive for evaluation.

5. In matters of cooperative acquisitions, interlibrary loan, and those other activities which may be grouped under the current umbrella term of networking, it is evident that libraries are making considerable and effective progress, just as is true of a number of the other areas discussed here. It is equally true, however, that libraries are quite far from the situation in which there is a true network of nationwide resources in which each library unit aggressively and positively carries out a program of informing its users that it will locate or get any required information item for its users within a reasonable time, and carries out that program; yet there is a truly substantial consensus that this is the need and the goal. The technical gadgetry which sometimes seems preoccuping—facsimile transmitters, teletype networks, and computer terminal on-line querying—is both a lesser problem and of lesser importance than figuring out how to increase librarians' own

professional willingness to find a way to serve the user across existing library administrative units.

It is indeed a fact that there are very serious historical, financial, political, and administrative barriers to the kind of full library cooperation in service to the user that one can say has been a consensus—or at least an ideal—of American librarianship since its first stirrings of professional consciousness in 1854. Certainly, we can see current growth in the political and financial barriers. Despite all this, the greatest barrier of all to achieving this kind of cooperation in service to the user is probably not financial, political, or administrative, but within ourselves as librarians.

Librarians are striving to overcome their difficulties and have made progress. The library card valid anywhere in the United States is still a dream, even though it has been achieved in England, but the card valid in at least all public libraries within a county or even a state is not a dream, but a growing reality. If each library continually evaluates itself and what it is doing against the consensus—or ideal, in this case—of what library networks should be, much may be achieved over the next decade.

At any given time in library history generally, or in the history of library processing or technical services in particular, some one type or several types of libraries have led the way for others. It is the unity of librarians across types of libraries which has enabled the United States to retain a position of leadership in library services since the nineteenth century. It was U.S. public libraries who pioneered reference services, which is why U.S. university libraries, despite all the apparent deficiencies, provide better reference services than academic institutions anywhere else in the world except in those countries which have learned from the United States. Public library systems—and our national library—pioneered in the centralization and standardization of cataloging procedures. In the decade just past, it was the special library which led in an alertness to reader needs and user services—many derived from and dependent upon depth in processing services—which hopefully is influencing the growing awareness of the need for such alert, progressive, and aggressive services today in both universities and local communities. It is the information center which has pioneered the new technology of processing services, linking it, hopefully indissolubly, with greater depth of information access and greater user services. The school library indisputably holds the lead today in welding all forms of media to meet user needs—a position of leader-

ship for which other types of libraries have yet to give due credit and the sincere flattery of imitation.

All of these advances indicate that better reader services are dependent upon better processing services—indeed, the case should be made that processing services *are* reader services, and that the service which does not exist to benefit the user has no place in libraries. To the extent that libraries can organize information, acquire needed materials, locate materials, and make materials easy to access and use, to that extent processing services can arm the reader services librarian with what he or she needs to aid the user.

The basic thrust, then, of this article is that librarians have derived sufficient substantial consensus on desirable goals and procedures to serve, at many levels, as an evaluative technique for individual libraries. While this evaluative technique may lack the precision of other methods, it is both easily applicable by almost any library, and leads directly toward attainment of professional goals. It is not a procedure which may lead us, in Ralph Shaw's words, to do efficiently those things which it is possible we should not be doing at all. In the long run, it is a service-oriented outlook which should lead librarians to make use of any technical device which helps them to give service, but involves no romance with the device for the device's sake. The technique promises rapid and positive results without either the pretense of being a panacea or the denial of the validity of a whole range of other evaluative techniques.

The processing services are on the threshold of an enormously promising period, difficult as some of the short-term problems may be. It seems certainly safe to say that technical capabilities are currently available beyond present program ability to exploit them. Librarians have a comparatively clear idea of where they want to go, and a remarkably deep professional agreement on goals, whatever surface differences may exist. Librarians have the ability to consolidate present gains and simultaneously to apply new techniques developed by information and media centers with a new kind of social purpose and awareness, broader and deeper than the period of progress limited largely to scientific and technical—as differentiated from social—needs. Circumstances certainly make possible productive evaluation and massive improvement of processing services to meet user needs. Whether we succeed or not is up to librarians who are involved in the processing services for the sake of serving the existing and potential users of library services.

Evaluation of Adult Reference Service

TERRY L. WEECH

THE EVALUATION of reference service has received considerable attention in the literature over a comparatively long period. But, as Samuel Rothstein pointed out in his 1964 *Library Trends* article on the measurement and evaluation of reference service,[1] much of the literature has focused on discussing the lack of evaluation or the shortcomings of the evaluation that has taken place. In the ten years since Rothstein wrote his article, there does seem to be more effort at evaluation of reference service. Undoubtedly, many of the trends in recent evaluation are due to the influence of Rothstein's article.

Since Rothstein provided a comprehensive review of reference service evaluation through 1963, this current study of the trends in the evaluation of adult reference service will concentrate on the literature since 1963. Before undertaking the task of describing recent trends in reference service evaluation, it seems appropriate to summarize Rothstein's findings. Rothstein concentrated on studies evaluating the provision of information to users, excluding those concerned with interlibrary loan and "library use" instruction. Making a distinction between "measurement" and "evaluation," Rothstein found that most studies were concerned with measurement rather than evaluation of reference services. "Measurement" is defined as "description in quantitative terms," and "evaluation" as the "rating or assessment of effectiveness and worth."[2] Rothstein observed that "evaluation presupposes measurement against a specific standard or yardstick or goal, and no area of library service has been more deficient in such standards than reference service."[3]

A simple count of the number of reference questions asked was found to be the most common form of measurement of reference service. Rothstein noted the drawbacks of this comparatively crude form of measurement, but indicated that it is often seen to be a good measure of the volume of work done. Beyond simple enumeration was

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the classification of reference questions into certain predefined categories, such as type of question (ready reference, directional or research); source of question (in-person or telephone); subject area (literature, social sciences, physical sciences, etc.); and purpose in asking the question (work, school, personal). Questions were also classified by the types of materials used to answer the question or the time taken to find the answer. Rothstein indicated that there had been little standardization in dealing with various categories, thus limiting valid comparison of the findings in different studies.

Other methods of measuring and evaluating reference service which Rothstein found in the literature included analyses of the characteristics of reference clientele, of the reference collection, and of the reference personnel and the organization of reference departments. Attempts at cost analyses of reference service were also noted, with several studies providing data on the average cost of a reference question.

Rothstein concluded from his examination of the literature on measurement and evaluation of reference service that, in terms of commitment of total staff time, reference service was not an important element in library operations. Available studies indicated that only between 6 and 8 percent of the total staff time was dedicated to reference service. Even those staff who devoted time to reference service appeared to spend a comparatively small proportion of their time answering reference questions, with most studies indicating that reference questions took no more than 37 to 47 percent of reference desk time. The literature also indicated that most questions were of the ready reference type, which could be answered in less than ten minutes. Although studies indicated that a variety of subject areas were covered in most reference situations, there did seem to be a concentration of questions in history, biography, social sciences, and pure and applied sciences.

As far as evaluation of effectiveness of reference service, Rothstein noted that effectiveness as measured by reference staffs' claims of satisfactory solutions ranged from 88 to 99.7 percent of all questions asked. Most studies which queried users as to their satisfaction with reference service found that approximately 90 percent were generally satisfied.

Recent Trends in Reference Service Evaluation

Since Rothstein's review of the literature, there have been many new attempts as well as repeats of the old methods of measuring and

evaluating reference service. Much of the literature still concentrates on measurement rather than evaluation, although there are indications of an awareness of the need for establishing goals and objectives against which measures may be judged and evaluation obtained. To facilitate comparison of the findings of this current review of reference source evaluation with those of Rothstein, studies which fit into each of the general categories of measurement and evaluation which he considered will be discussed in turn. After the developments of the last few years have been surveyed, conclusions which can be drawn from recent trends will be indicated.

ENUMERATION AND CLASSIFICATION OF REFERENCE QUESTIONS

The counting or enumeration of reference questions is still a popular method of measuring reference services in libraries of all types. No attempt has been made to do an exhaustive search of the literature to determine the extent to which simple enumeration is used, but the most recent edition of *Public Library Abstracts*, which covers public library annual reports for 1971, indicates that nearly 50 percent of the sixty-six public library annual reports abstracted contain data on the number of reference questions or reference transactions.[4] Although many of the annual reports cited go beyond simple enumeration and provide analysis by type of question or source of question, the total count of reference questions asked or answered still appears to be used as an indicator of service provided.

A 1970 survey of the measurement and evaluation policies of thirteen large academic libraries revealed that less than half kept records of the number of reference questions asked.[5] Florence Blakely, who conducted the survey, reported that five of the thirteen libraries enumerated the number of reference questions asked for internal use only. Three of the libraries responding to the survey attempted to some extent to record actual reference questions. Other libraries depended on a sample of selected questions rather than a comprehensive tally. Although the proportion of academic libraries enumerating reference questions in Blakely's survey is less than the proportion of public libraries reporting enumeration in *Public Library Abstracts*, both sources suggest that simple enumeration of reference questions is still an accepted method of measuring reference service in many public and academic libraries.

Classification of reference questions by subject area, source, or time expended also continues to be used as a means of measuring reference service. In response to a request for information on how libraries

measure reference, Hawley reported that classification by source or time taken to answer the question were common methods.[6] In an apparent attempt to refine the traditional clarification, Cornell University Libraries use the following five categories in gathering data on reference questions: (1) informational and directional questions, (2) reference questions (questions requiring less than fifteen minutes and two or more types of sources to answer), (3) search questions (questions requiring from fifteen minutes to an hour, and three or more types of sources to answer), (4) problem questions (taking over an hour to answer), and (5) bibliography questions (original compilation by staff taking at least one hour).[7] Tally sheets are used to record the data at reference service points. Some attempts are made to record actual questions in the "search" and "problem" categories.

Perhaps one of the more unique methods of categorizing reference questions is that done by Caroline Hieber in her master's thesis on library reference questions and answers.[8] She classified the form and content of the answers rather than the characteristics of the questions. Hieber's five categories for answers to reference questions consisted of the following: (1) exact reproduction (picture, map, text), (2) fill in the blank (address, date, etc.), (3) descriptive (biography, definition, method, etc.), (4) information about (how something works), and (5) list of references. She found that nearly half of the answers provided during a two-year study period at Lehigh University Library were of the "fill in the blank" type. Although one may not agree with the specific categories Hieber used, the shift of emphasis to the characteristics of answers might warrant further consideration.

There have been several attempts at improving and standardizing measures of reference service based on enumeration and classification of reference questions. The Cincinnati and Hamiltion County (Ohio) Public Library has produced a manual on keeping reference statistics.[9] Undoubtedly other libraries have specific procedures outlined in their administrative manuals. In 1964, Beasley outlined recommendations for standardized statistical reporting of library data for Pennsylvania Libraries.[10] Beasley pointed out that often neither the number of reference questions nor the categorization of questions results in meaningful data. He suggested that the number of full-time people who are engaged in reference work is the best indicator of comparative reference service effort from library to library.

Some attention is also being given to the study of unanswered reference questions. Often a record is kept of unanswered questions to enable a reference department to evaluate its performance, to make

selection decisions, or to evaluate bibliographic or index tools. But data on unanswered questions are not always easy to obtain, as Jahoda and Culnan discovered in a recent study.[11] They attempted to determine possible improvements which could be made in bibliographic access to scientific and technical information sources by requesting the sixty-eight members of the Association of Research Libraries with sci-tech libraries to contribute their unanswered questions for analysis. Only twelve libraries responded and only forty-seven questions were made available for analysis. The researchers concluded that this return was insufficient to carry on the study and that another method of evaluation would have to be devised. Although Jahoda and Culnan were not successful in getting sufficient data to carry out their study, the analysis of unanswered questions as a possible source of data for evaluation of reference services warrants consideration. Perhaps other data-gathering techniques will have to be developed to overcome the reluctance of librarians to share their "failures" and expose their shortcomings.

Although the foregoing studies indicate that many libraries still depend on enumeration and classification of reference questions as a primary method of measuring reference service, other studies suggest that there may be a trend away from the gathering of such reference statistics. A 1969 study of Iowa libraries by Phipps found that a comparatively small proportion kept reference statistics.[12] Of the 389 public libraries that responded to the questionnaire which Phipps distributed, only forty-two reported that they kept reference statistics. Among those libraries keeping reference statistics, there was little uniformity in the type of statistics kept. Twenty-two of the forty-two libraries keeping reference statistics indicated that they used the data in budget requests. Only seventeen of the libraries reported that they felt such statistics were really helpful.

The value of reference statistics has also been questioned in other studies. Ruth White's survey of reference services in libraries in the Atlanta area indicated that while a larger proportion of libraries surveyed kept reference statistics than did the Iowa libraries studied by Phipps, 55 percent of the 108 libraries surveyed—less than half of those that did keep statistics—felt that they were worthwhile.[13] The negative attitude toward reference statistics is further confirmed by the literature on the subject. In a 1970 review of the literature, Hawley observed articles which mentioned reference statistics usually indicated that such statistics should be avoided.[6]

ANALYSIS OF REFERENCE CLIENTELE

An alternative to data on reference questions is the analysis of the characteristics of those who use reference service. Few libraries seem to gather data on users on a regular basis, but many library use studies, and some studies specifically on reference service do include data on the characteristics of reference users. Two general surveys, both by Nelson Associates, Inc., have attempted to determine some specific characteristics of reference users. In a 1968 survey of the users of the Research Libraries of the New York Public Library system, extensive data were gathered on users of both mail and in-person use of reference services.[14] Occupational and educational characteristics of users were identified as well as reasons for the information being requested. Just over 20 percent of all users who responded to the questionnaire indicated that they had consulted a librarian for the answer to a specific reference question.

The majority of the persons consulting library staff did so to seek assistance in finding material. Although the seeking of assistance in finding material might require reference staff assistance, the investigators distinguished it from the asking of a specific reference question. Of those who asked a specific reference question, 24 percent were pursuing academic work, 41 percent were business related, and 39 percent were involved in independent research or pursuing a personal interest.

The second Nelson Associates study which analyzed the characteristics of reference users involved a study of the public libraries in Lucas County, Ohio.[15] The users of the Toledo, Sylvania, and Lucas County public libraries were queried as to their reasons for visiting the library. Thirty-eight percent indicated that they were seeking information on a specific subject. Of these, 50 percent were seeking the information for personal reasons and 45 percent for school work. Although the user characteristics are not broken down in as much detail nor are the categories as discriminating as to the reasons for seeking the information as in the New York Public Library study, the fact that a fairly large proportion of visits to the Lucas County public libraries were reference or information related suggests the relative importance of reference and information sources to total library use.

In the study of reference services and use in the metropolitan Atlanta area, Ruth White found that 70 percent of the 94 public library patrons interviewed made use of library reference service.[16] Academic library users were also interviewed and 87 percent of the 128 queried had made use of library reference services.[17]

Two other recent studies of academic library users are also worth noting because of the different approaches they took in analyzing users of library reference services. A 1971 survey of the users of Brown University Library classified students who requested reference assistance by their subject major.[18] It was found that 46 percent of the students using reference services were humanities majors, although humanities majors made up only 32 percent of the total student body. No breakdown by specific majors in the humanities was given. It should be noted, of course, that the results of the Brown University survey may well reflect the greater use of library resources by humanities majors, of which reference service is just one aspect.

One of the methodological drawbacks of user studies, of course, is the fact that data are gathered from a self-selected and limited group. Different results might be obtained if the population of all potential as well as actual users were queried. At least one such study has been attempted. Swope and Katzer interviewed 119 persons using the Syracuse University Library to determing whether they had reference questions.[19] Forty-one percent of those interviewed indicated that they had reference questions, but 65 percent of those with questions would not ask for reference assistance from the library staff. Of those who would not ask for assistance, the majority felt that their question was too simple, were hesitant to bother the librarians, or had had an unsatisfactory prior experience in seeking reference assistance.

These reasons for not seeking assistance, as reported by Swope and Katzer, suggest that further studies of nonusers of reference services might be warranted. As Rothstein noted in his review of reference evaluation, user evaluation of reference service tends to be consistently high.[20] White also found in her study of the libraries in the Atlanta area that users were highly satisfied with reference service provided, but noted that this high level of satisfaction may result from the fact that users may bring only simple or easy questions to reference desks.[21] Swope and Katzer's findings suggest that the wrong persons may have been interviewed when researchers sought user evaluation, or at least they have not been asking all the people they should have been. Perhaps if the concentration was on nonusers, a lower level of satisfaction would be found since these would be the former users. It may very well be that those who are not satisfied with reference services simply do not use them and are thus not given opportunity for input into user surveys. Future research should certainly take the nonuser into consideration.

STUDY OF REFERENCE COLLECTIONS

As most of the studies involving evaluation of reference collections indicate, reference collection evaluation is still being carried on primarily by the use of standard book lists (see Additional References). Recently, however, there have been some attempts to provide alternatives to the standard book lists. Houser has evaluated reference collections of New Jersey libraries by date distribution of the materials.[22] The copyright dates of each title in the collection were graphed to indicate a curve of approximate frequency with which various copyright dates appeared. The method assumes a relationship between copyright dates and value of the reference materials. Such a relationship may not be valid in the case of all reference materials, but it does indicate the value of the collection in relation to retrieving current information; and it does provide an interesting alternative to the usual standard book list.

Another attempt to provide an alternative method of evaluation of reference collections was initiated by those who evaluated the New York State public library systems in 1967.[23] Users were asked through a questionnaire to evaluate improvements in library facilities as a result of state aid. They found that 64 percent of the respondents felt reference resources had improved as a result of state aid. Although the validity and reliability of the instrument might be questioned, the use of user input to evaluate reference collections is an interesting technique and might be used as one of the several measures of the value of a given collection.

REFERENCE PERSONNEL AND ORGANIZATION

The analyses of the characteristics of reference personnel have been undertaken by several investigators in the last few years. As noted above, Beasley suggested that the number of employees who devote their time to reference work may be the best indicator of reference service effort on the part of libraries.[24] Rothstein found that the studies which he had access to reported that less than 10 percent of library staff time was devoted to reference service.[25] Recent studies have indicated that the proportion of total staff time devoted to reference service ranges from 11 percent[26] to 20 percent.[27] While these data suggest a slightly greater importance of reference service in terms of total library staff tasks, reference service is still a comparatively small proportion of total staff effort. As Rothstein noted, even staff assigned reference duties spend less than half of their time actually answering reference questions.[28] Jestes and Laird found that reference staff at the Univer-

sity of California (Davis) library spend no more than 21 percent of their desk time answering reference questions.[29] Of the questions asked during the period of the study, only about one-fourth were considered to require professional training to answer.

The question of the necessity of professional training and its relation to reference service and staff performance has been the subject of several recent investigations. Charles Bunge's doctoral dissertation was concerned with the relationship between professional training and efficiency of reference librarians in answering questions.[30] Nine pairs of reference librarians with contrasting backgrounds of professional training were selected from seven medium-sized midwestern public libraries. Reference performance of each of the pairs was measured by observing the response of the librarians to a set of test questions. The reference librarians were measured as to the time they took to find the answers to the questions and the correctness of the answers provided. Bunge found that there was no significant difference between the ability of professionally trained librarians to answer questions correctly and those not professionally trained. But Bunge did find that the professionally trained librarians took significantly less time to answer the questions. When quickness in answering and correctness of answers were combined to form the concept of reference efficiency, the difference between those professionally trained and those not so trained was statistically significant. Alternative variables, such as age of participants, number of years since formal education, and number of hours at reference desk, were tested. Most were found not to be related to reference efficiency. Thus Bunge concluded that professional training is related to reference efficiency in terms of correctness and quickness of answer.

In 1970, Young reported on an attempt to determine the feasibility of student assistants providing reference service in an academic library and found that out of 299 questions received in the two-month period of the study, all but 21 were answered by the student assistants.[31] He also reported that users found the student assistants more approachable than professional reference librarians. This latter characteristic, of course, most probably reflects the peer image which student assistants conveyed to student users. The question of approachability is, however, one of the more important characteristics of reference staff, but is seldom measured or evaluated. Lopez and Rubacher have reported on one effort to measure the relationship between the "interpersonal dimensions" of reference librarians and patron satisfaction.[32] Librarians were rated by a patron and by a professionally trained rater

in interpersonal relations. A positive relationship between the level of interpersonal dimensions displayed by the librarians and the level of patron satisfaction was found. Although this effort was essentially exploratory, it does raise the possibility of further development of criteria for the measurement of a librarian's ability to relate to patrons.

A technique has been developed by Cravens to predict information processing behavior of information specialists.[33] Using task-oriented empirical data, Cravens identified some sixteen variables which he felt might predict performance of specific tasks related to information retrieval. Using multiple correlation techniques, he isolated five variables which seemed to be the best predictors of job performance. Although the analysis was exploratory and more work would be needed before it could be applied to actual situations, it certainly should be of interest to those concerned with reference personnel selection and evaluation.

No recent studies concerned with the evaluation of reference department organization were found. One study of reference service in undergraduate libraries is somewhat related to reference department organization and should be noted here. Wilkinson studied the level of reference service in two undergraduate libraries in large universities and compared the reference services to those given to undergraduates in the libraries of two four-year liberal arts colleges.[34] He found that a higher level of reference service was made available to undergraduates in the four-year liberal arts colleges he studied than in the undergraduate libraries of the universities studied.

COST ANALYSIS

Lopez, in a recent review of the literature of measurement of costs and value of reference services, points out that measures of reference costs are often "rather simplistic" because they are based only on the salaries of reference librarians divided by the total number of hours of reference services to arrive at an hourly cost.[35] The number of reference questions per hour is then often used as a basis for determining dollar cost per question. Lopez criticizes this method because it ignores the overhead and operating costs of libraries and thus gives an underestimate of actual library reference costs. These objectives, of course, could be applied to many library cost studies, for the "simplistic" technique is not limited to reference service cost analysis.

There have been comparatively few attempts to determine costs of reference service, whether using simple or more complex techniques. One recent study of the Beverly Hills Public Library did arrive at a

rough estimate of reference and reader advisory service costs by dividing the annual costs of the services as reflected in the library's budget by the number of people using the service.[36] An estimate of the number of users was based on a sample of use during selected two-hour periods in March 1971. An estimated cost of $0.82 per visit was derived from the data.

Another attempt to determine reference costs involved a study of seven large Illinois libraries by Palmour and Gray.[37] Data were collected by keeping reference logs during a two-week period. Only salaries were used to calculate the costs. The costs were broken down by type of question. Average costs for answers to the questions ranged in the seven libraries from a low of $0.19 for answering simple fact questions to a high of $7.58 for answering a complex fact question. In the four libraries acting as Research and Reference Centers for the Illinois Public Library Systems, the weighted average costs were $0.32 for simple fact questions, $0.45 for bibliographic citations, $1.04 for multiple fact questions, and $2.77 for answering complex fact questions. Although the method used depends only on the salaries of reference personnel, the Palmour and Gray study is an interesting attempt to break down costs by type of question. This undoubtedly has an advantage over cost studies which group all questions together in a cost analysis.

None of the above studies attempt to carry their cost analysis to the point of comparing costs with benefits received and thus arriving at a cost-benefit analysis. One such attempt is Kramer's evaluation of reference services in a special library serving a technical-industrial clientele.[38] Kramer attempted to compare the costs in terms of time expended in bibliographic and reference service by library staff to the benefits experienced by the library's clientele in terms of library search time saved. Questionnaires and interviews were used to establish the benefits to the clientele. When asked how much time the reference services saved compared to doing the library searching themselves, the respondents who had initiated 153 requests estimated that the reference staff had saved them a total of 9,479 man-hours of library searching. The library staff carried out the 153 searches in 1,071 man-hours, thus realizing considerable savings in total man-hours expended. Although the methodology of Kramer's study is admittedly less than rigorous, it does provide at least a rough estimate of how users see library reference services in terms of time saved.

STANDARDS OF REFERENCE SERVICES

As Rothstein noted in 1964, evaluation presupposes standards or goals. He also noted that most existing standards do little more than specify that reference service should be made available.[39] In 1964, the Reference Services Division of ALA was in the process of developing a plan for evaluation of reference services.[40] Nearly ten years later, the plan is apparently still in process. White's study of reference services in the metropolitan Atlanta area was sponsored by the Reference Services Division of ALA as a step toward getting background data for reference standards. But as of this writing, the standards have not appeared. Library standards published since Rothstein's article have tended to continue the tradition of recommending little more than that reference services should be provided. Notable exceptions to this trend are the British standards for public library reference service and the proposed revisions to these standards.[41] Both provide detailed criteria for reference materials, administration organization, physical facilities, and personnel qualifications and responsibilities. Such detailed standards have yet to be developed in the United States.

But the goals and objectives necessary for evaluation are not necessarily limited to formal standards. It is possible for libraries to establish their own goals and objectives and measure their reference services against them. It is also possible for investigators to establish their own criteria to measure reference service against. One such criterion, as noted in the Bunge study,[30] is correctness and efficiency in answering questions. This criterion has been used in many studies through the means of test or sample questions and has evolved into one of the newest and most controversial of methods of reference service evaluation, the unobtrusive measure of reference service.

TEST QUESTIONS AND UNOBTRUSIVE MEASURES

Test questions, which are sometimes referred to as sample questions, attempt to provide a measure of reference performance from the user's point of view. The questions are usually selected to provide a range of difficulty and require a variety of sources. The responses are observed and recorded by the investigator and measured against the criteria of accuracy, speed or other accepted indicators of good reference service. Unobtrusive testing, recognizing that reference personnel who know they are being evaluated may perform differently than in nontest situations, attempts to simulate the actual user situation by not revealing that an evaluation of performance is taking place. By keeping the reference observation and evaluation hidden, the act of

evaluation does not "obtrude" on the situation and thus a more "realistic" evaluation may result.

Lowell Martin may have been one of the first to use the concept of "test questions" and "reference observation." In his 1945 dissertation on the optimum size of public library units he observed the performance of reference personnel by sitting near the reference desk. To assure that sufficient data would be available, he compiled a list of questions to ask in case there was insufficient reference desk activity during the observation periods.[42]

In 1957, the New York Committee on Public Library Service reported using a list of test questions to evaluate the reference services of the libraries under study.[43] Similar test questions were used approximately ten years later in the study of New York Regional Public Library System.[44] The test or sample question technique was also used to evaluate reference services in Lowell Martin's 1967 re-survey of Pennsylvania public libraries[45] and in Nelson Asociates, Inc. 1969 study of public library systems in the United States.[46]

Herbert Goldhor submitted ten questions to twelve area libraries in his study of public library service for the metropolitan Minneapolis-St. Paul area. An innovation which Goldhor introduced to the test question technique was the use of the concept of "success score." Librarians providing a correct answer to a test question received two points, those who knew where the correct answer could be found even though their resources prevented them from providing the answer received one point, and those who gave no answer or an incorrect answer received no points.[47] The "success scores" were then totaled for each library and for groups of libraries resulting in a fairly sensitive index of comparative success.

In 1968, Terence Crowley applied the technique of unobtrusive measurement in his study of the effectiveness of information services in medium-sized public libraries.[48] In the course of gathering data to test the hypothesis that there was a relationship between financial support of public libraries and the proportion of information questions answered correctly, Crowley and a number of "proxies" asked questions in person and by phone at twelve New Jersey libraries. Although Crowley was not able to confirm his hypothesis, he had established a new technique in reference evaluation.

The unobtrusive method has been applied by many investigators since Crowley first introduced it. Lowell Martin, with the assistance of Terence Crowley and Thomas Shaughnessy, used "anonymous shoppers" in the 1969 study of the Chicago Public Library.[49] Thomas

Childers applied the unobtrusive method to reference service evaluation in his 1970 study of telephone information services in New Jersey public libraries.[50] He used twenty-five different inquirers to ask twenty-five questions. Although using different questions, Childers's findings in terms of the proportion of questions answered correctly by the librarians were amazingly similar to those of Crowley, both finding that just under 55 percent of the responses were correct. Dorman Smith studied the reaction of librarians in twenty libraries in the Boston area as he asked for reference assistance without identifying himself as a researcher.[51] A representative sample of twenty-five public and twelve academic libraries in Ohio was subjected to unobtrusive evaluation of their reference services.[52] The Suburban Library System, serving a portion of the Chicago suburban area, recently proposed the establishment of a "snoop group" which would make reference requests at unpredetermined times to evaluate reference performance of libraries in the system.[53]

In a recent review of the literature of unobtrusive measurement of reference services, Childers cited an Enoch Pratt Free Library evaluation of telephone reference service based on the monitoring of calls received by the telephone reference staff.[54] Although not strictly unobtrusive, since staff members were aware that they were being evaluated, it is similar to the unobtrusive technique because the precise periods of evaluation appear not to have been announced in advance.

The use of test questions and unobtrusive measures has resulted in quite a different view of reference performance than other measures. Contrary to the high level of user satisfaction and the high degree of success reported by librarians in earlier studies, the results of studies using test questions and unobtrusive measures indicate that most libraries that have been evaluated to date are able to answer correctly just slightly more than half of the questions posed. Nearly every study using the technique has reported that the greatest failing is found in questions which require current information. Using the criterion of providing accurate answers to questions, these studies suggest that there is considerable room for improvement in the libraries tested.

As noted above, unobtrusive testing as a method of evaluating reference service has not been without controversy. The question of the ethics of evaluating people without their knowledge has been raised by many who have considered the method. The reaction to the Illinois Suburban Library System's proposed snoop group has been such that the name, as well as other aspects of the proposal, will be changed.[55] In response to an expression of concern over the ethical

questions involved in the use of unobtrusive testing, a defender of the method has replied that reference staff are public persons working in a public capacity, and thus unobtrusive testing cannot really be equated to invasion of privacy.[56] He also emphasized that the method has not been, nor should it be used to single out the performance of individual staff members so that they could be identified. The experience of a recent Maryland workshop for public librarians indicated that many librarians' initial negative reaction to unobtrusive measurement is tempered somewhat after given an opportunity to use it themselves.[57] Most came to feel it could be useful in evaluation of their own services, but that great care should be exercised that it never be used to threaten job security or single out specific staff members.

The use of unobtrusive measures has indeed raised many issues as to ethics of research procedure. It has also revealed a great gap in quality of service in many libraries where it has been applied. Its advantages are that it is comparatively easy and inexpensive to implement. Its major disadvantage appears to be the effect its use may have on the attitudes and morale of the persons tested. The next appropriate area of research may be a follow-up of persons who have been evaluated unobtrusively to determine any effects of exposure once the unobtrusive measure is made known.

REFERENCE EVALUATION SURVEY

In preparing this article, data from an unpublished survey initiated by Charles Bunge in the fall of 1972 were used to gain insight into the present state of the art of evaluation of reference service in all types of libraries. Eighty libraries were selected randomly from the *American Library Directory* and information on evaluation of reference services was requested. Specifically, information was requested as to: (1) forms used to measure reference service, (2) internal administrative reports on reference service, (3) objectives or goals which have been formulated for reference service, (4) information on measurement or evaluation used to determine whether these goals have been reached, and (5) any special evaluative studies of reference services done for the library. Twenty-seven libraries responded with information on one or more of the categories. Seventeen libraries indicated that they had special forms which were used to record reference statistics. Seventeen libraries also responded that they compiled monthly or annual reports on reference service. It should be noted that the seventeen which indicated they used forms were not all the same seventeen indicating that they submitted reports. Four libraries which used forms did not

submit formal reports. Four which did not indicate that they had special forms did indicate that they submitted special reports. Of those which sent copies of reports or which commented on their content, the classification of reference questions by type or source seemed to be the most common reference statistic included. Several relied only on simple enumeration of the number of questions asked. Only three of the twenty-seven libraries responded that they had formulated goals or objectives for reference service. Of these, only one library indicated that it attempted to apply its reference measures against the goals set. In this one case, a public library, the measure of evaluation was the number of questions asked and successfully answered. Five other libraries responded that although no specific goals or objectives were stated formally, references service was evaluated either through patron response or by the count of the number of unanswered questions over a period of time. Six libraries responded that they had had special studies of reference services which ranged from user studies to reference collection evaluation. One library indicated it had been part of an unobtrusive test of reference service.

Because of the small size of the sample and the low response rate to the survey, no attempt should be made to consider the results as indicating the state of the art of reference evaluation in all American libraries. They do, however, indicate that there is little going on in the way of reference evaluation in the libraries which responded. There is little reason to believe that those libraries which did not respond have a higher incidence of evaluation. The finding that measures of reference service still concentrate on the traditional measures of reference question enumeration and classification is consistent with the findings of other surveys and the results of the examination of the annual reports in the 1971 *Public Library Abstracts*. Even if the limitations of the survey are taken into account, the small number of libraries responding which indicated that they had established goals and objectives for reference service and the even smaller number which have attempted to carry out evaluations in terms of the stated goals suggests that much needs to be done to stimulate evaluation of reference services in American libraries.

Most evaluations of reference service have depended on observation, interview, or questionnaires as a means of gathering data. Since many are exploratory or informal studies, not much attention has been given to methodological rigor. Few have attempted to determine the reliability of the instruments or the validity of the data gathered. In the case of reference statistics, the lack of standardization in counting and

classifying reference questions has been a recurring problem. National guidelines for gathering such data could be helpful. Standard categories for analysis of reference clientele would also make future studies more meaningful.

Several innovative techniques in evaluation of reference collections have been noted. One possible direction for concentration of future research is the area of user information needs and the types of collections that can meet these needs. Goldhor reported in his Minnesota survey that a number of librarians knew where to find the answer to questions, but did not have the source at hand.[58] This suggests a possible application of the "test question" method to evaluation of reference collections as well as to reference staff and services.

Analysis of reference staff is, of course, closely related to the evaluation of staff performance. Many of the test question and unobtrusive measures have been related to reference staff evaluation. Areas of possible future research might include a study of any relationship between performance and selected variables such as type of reference department organization or size and type of reference collection.

Current cost studies of reference services suggest a need for guidelines for determining what should be included as part of reference service cost. Guidelines as to overhead costs appropriate to reference service would be especially helpful. Librarians and researchers have little data to guide them in determining what proportion of the total book collection costs should be attributed to reference service overhead.

As noted above, the primary trend in reference service evaluation seems to be in the area of unobtrusive testing of reference performance. Whether this trend will continue will probably depend as much on the library profession's acceptance of the technique as a legitimate and appropriate one as on any other factor. Its future, as Childers has pointed out, lies in its use not only as a tool for quality control of reference service, but also as a means for gathering data on which nationwide standards for reference service might be based.[59] Until the technique of unobtrusive evaluation was applied to reference service, there was little data available to indicate needed improvement in reference services. Librarians were saying that they were answering better than 90 percent of all questions, and users were reporting that they were well satisfied. But data from unobtrusive measures have so far indicated that there is reason to suspect these prior findings. A program of nationwide testing to determine the best performance that the best of libraries are capable of providing may be a step toward achiev-

ing relevant performance standards for the nation's libraries.

Just as Rothstein found nearly ten years ago, the lack of standards and guidelines is still evident in the literatire of reference evaluation. Some advancements in methodologies have been made and a great deal of imagination has been shown in some of the studies done in the last ten years. But until such a time as there are guidelines for gathering and measuring data, evaluation of reference service is likely to continue to be exploratory and indeterminant.

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Evaluation of Public Services for Adults

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EVALUATION OF adult services as a topic requires a definition and some arbitrary exclusions. This paper will review the progress toward evaluation of particular forms of adult services within libraries, evaluation of total adult service programs within a library, and broad evaluation of the status of adult services within public librarianship at the state and national level. It will attempt to identify the problems that have stood in the way of evaluation in its tightest sense, and to highlight the few important steps taken within the last ten years in evaluation of adult services.

Public services to adults consist, in common parlance, of a cluster of techniques, procedures and methodologies by which libraries of all types serve adults. Since evaluation of reference and information services has been surveyed separately for this issue the exclusion of these services and the "reference department style of service" from the responsibility of this paper might have a tendency to emphasize the fracture of the field of adult services into activities. It will be the purpose of this paper to avoid such a fracture, while dealing directly with either broad adult service programs or with "nonreference" methodologies and techniques of adult services.

Adult services in its entirety builds programs of service to users around four major functions: (1) information and bibliographic services, (2) guidance and advisory services, (3) orientation and instruction in library resources and their use, and (4) stimulation of the library's public (user and nonuser) to intensified use of the library's resources and services. When discussing evaluation of broad programs of adult services, the field in its entirety will be considered. When discussing evaluation of specific service techniques or methodologies the concern will be primarily with the last three functions.

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Problems Inherent in Adult Services Evaluation

Because the field of adult services is a new one, with the term emerging as recently as the 1940s, there are limitations within the field itself that pose difficulties in evaluation. First, lack of agreement within the library profession as to the goals of adult services, except at the vaguest and most general level of formulation, has made it difficult to assign priorities or precise objectives to adult service programs on a national basis. Second, measurable objectives in terms of library output or library impact have not been possible to conceive since adult services have been activated by the user rather than the library, which maintains a "readiness to serve" attitude. Third, principles of adult services have not been formulated with a precision that makes evaluation of process a matter of more than personal taste. Finally, the sociological and psychological research skills needed for evaluation of the impact of adult services have not been mobilized to the task. Change in each of these areas, however, is in process in the 1970s.

Evaluation depends upon use of a formal philosophy or set of goals, values and theory that determine "what is desirable," as a framework for evaluation. The philosophy or goals derived from national or state standards, local panels of judges, and statements from the library leadership have all been used as bases for evaluation. As Olson (1970) pointed out in his Indiana Study,[1] consensus in the area of adult services goals has not been achieved. Even national standards have lacked the level of precision in values needed for evaluation purposes. While *Minimum Standards for Public Library Systems, 1966*[2] shows a distinct advance in precision on goals and adult service principles evolved in the decade following the groundbreaking 1956 *Public Library Service: A Guide to Evaluation, with Minimum Standards*,[3] precise measures are identified far more abundantly in areas of personnel, materials, physical facilities, and the administrative aspects of services than in requirements of the services themselves. The inventory of service activities to be performed or persons to be served dominates the adult service aspect of the 1966 *Standards*. The evolution in 1973 and 1974 of new standards for adult services may provide a significant advance toward a precise statement of goals that will allow development of measurable objectives. With Lowell Martin's carefully constructed analysis of the needs of the Chicago Public Library (1969),[4] the statements of service goals, objectives and descriptions are closely linked and may provide a model for the more general national standards.

A second problem in developing evaluation of adult services lies in the public libraries' structuring of service activities primarily around a

"readiness to serve" rather than library initiation of services. Because adult services have traditionally been viewed as activities performed when users demand them, they have lacked a sense of intensive purpose or precise objective which is important to establishing measures for evaluation. Evaluation has been more readily developed in relation to service to special publics whose use of the library is related to their particular needs or problems, which then become a focus for service and release librarians to initiate such service. Measurable progress toward solution of those problems and meeting of those needs can then be identified. Lacking such identifiable objectives, services have traditionally been measured in terms of library "inputs" (books added, reading lists prepared, etc.) or, at best, "library outputs" (attendance at the Open House, books circulated from the exhibit), rather than in terms of "library impact" on the problem or need.

If the services of the library are to be measured in terms of impact on society, then they must be designed with the social problem or the social need clearly in mind. Problem-oriented service design has been emerging in adult services from the time of *Minimum Standards for Public Library Systems, 1966,* in which a new principle for service was enunciated: "The library system serves individuals and groups with special needs."[5] Martin elaborated this concept as a central thesis in his study of the Chicago Public Library as he envisioned the large public library system as "a congery of special libraries adapted to the distinct groups and interests that characterize the diverse urban population."[6] The needs and problems of these special groups were to have important influence on the direction of library service.

The lack of a body of principles for adult services is a third obstacle to evaluation. Principles that provide a basis for analyzing the purposes for which an adult service is appropriate have not been clearly formulated nor agreed upon. New York Public Library's circulation department initiated a service policy manual in the early 1960s, but found the task formidable and difficult of consensus; such a manual of understandings is almost essential to evaluation of an adult service technique or of a broad program of adult services. Again, national standards might be assumed an appropriate place for statement of these principles, and the revision of standards now in progress may provide greater clarity of principles of service forms and their interaction in an adult service program.

Monroe's formulation of principles of reader services (1971) related to the disadvantaged,[7] the statement on "Service for the Disadvantaged: Principles" prepared by the ALA Coordinating Committee on Library

Service to the Disadvantaged (1971),[8] and Lipsman's (1972) criteria for services to the disadvantaged[9] show the stimulating influence of this area of service to development of a needed body of principle.

A fourth problem inherent in adult services evaluation has been the failure of the field of adult services to recruit and utilize skills of sociological and psychological research techniques in program evaluation. Because broad programs of adult services have as their objectives the meeting of a wide range of personal and social needs, evaluation in terms of "library impact" or even of "library output" requires sociological and psychological research skills and understandings seldom activated in the field of adult services. Uses of unobtrusive measures and social indicators, as well as psychological measures, have not evolved strongly in the evaluation of adult services, and are only beginning to appear in the 1970s. Edward Suchman has provided a guide outside the library field, but directly applicable to adult services programs, in his 1967 treatise on *Evaluative Research: Principles and Practice in Public Service and Social Action Programs*.[10] Douglas Zweizig[11] (1973) has utilized models of research and statistical measures from the fields of communication and psychology that demonstrate the applicability of these fields to evaluation problems in adult services.

Thus, specific progress can be noted on the fundamental deterrents to effective evaluation in the field of adult services in the 1970s.

Influences on Evaluation of Adult Services

The period from 1965 to the present has seen the influence of at least three major factors on the development of programs of evaluation of adult services. Municipal and county management has begun to require public libraries as departments of government to assume their share of public accountability through application of the Program-Planning-Budgeting Systems (PPBS) or Management by Objectives (MBO) programs, and these systems build evaluation into the strategy of programs of service. Secondly, the staff of the Bureau of Libraries and Educational Technology, U.S. Office of Education, has given sustained emphasis to evaluation of adult service projects undertaken with their grant funds. Finally, the development of research orientation within library school curricula, concurrent with research programs and doctoral research expansion, has provided skills in evaluation and awareness of its significance among a wider group of librarians.

As research entered librarianship as a style of investigation, evaluation made its way into the concerns of adult services, but only as an

occasional event. Joeckel and Carnovsky's 1940 study of the Chicago Public Library[12] included as a small segment the evaluation of the Readers' Bureau—the heart of the adult service function of guidance and advisory service. They saw its limitations and recommended decentralization of its functions. Evaluation follow-up on the effects of this action did not come until 1969 with Martin's study,[4] which reported that decentralization killed the function. The need for sustained, responsible application of evaluation to the program of adult services is coming in the 1970s; however, it is coming not through isolated research projects, but through sustained, annual review associated with PPBS or MBO or a diversity of related management structures for evaluation and review. The mood demanding public accountability of public agencies is forcing a desirable sustained emphasis on evaluation.

Typical of the influence of the PPBS procedures set in motion in public libraries is that in the Madison (Wisconsin) Public Library, chosen as an experimental agency to develop a pilot program budget for the city of Madison in 1969.[13] The resulting budget was structured in terms of "General Services" to foster the individual's development and ability to participate in society through provision of materials and service for self-education, vocational improvement, personal recreation, and cultural and intellectual enrichment; "Reference and Informational Services" to provide a wide range of materials and skilled personnel to assist library users in obtaining specific information; "Group and Community Services" to serve the citizens of the community by assisting and cooperating with agencies and organizations in implementing and developing their programs; "Services to Groups with Special Needs" to serve groups and individuals whose needs, because of limitations in their ability to participate in conventional library programs, require specialized materials and services; "Unassigned Services" consisting of administrative, planning, publicity, and staff development; and "Basic Support Services" including circulation, technical processes, supervision, facilities, and office routines. Output indicators were developed for each area of service, and in the preliminary edition tended to be counts of activities, patrons, uses.

The fact that an annual review of the program will be conducted means that fresh insights in relationship of goals to objectives, objectives to program, and program to costs and priorities will be built into the budget in the context of evaluation. MBO and PPBS are now common styles for public library planning, and will exert the greatest sustained influence on evaluation of adult services.

A second strong impetus to evaluation came from the federal government in the period from 1965 to 1972. The administration of the Library Services and Construction Act (LSCA) by the Bureau of Liraries and Educational Technology of the U.S. Office of Education has had a strong influence on evaluation of adult services in the following ways:

1. The provision of grant funds for projects in local libraries related to disadvantaged, handicapped and institutionalized (special publics) gave emphasis to development of adult services of some depth and variety to special publics, and brought the focus of adult services to the reader and away from the more traditional "mode of service."
2. The requirement of LSCA grants that there be "evaluation" of the service, with more emphasis each year upon the sophistication of this evaluation, has built into local public library systems a recognition of evaluation as a major step in planning programs.
3. The need to plan in terms of library objectives and community needs rather than relying on "making materials available," has been a first major insight that underlies the "evaluative approach to adult services."
4. The LSCA workshops for state library staff at Ohio State University concerned with planning and the use of the CIPP model for planning is acknowledged by state library staff to have greatly enhanced the state consultants' ability to help public library staffs plan and evaluate adult services.

An exceptionally fine example of state-level response to the requirement by the Bureau of Libraries and Educational Technology that there be a formal program of planning-implementation-evaluation, is that of Nebraska. Two basic publications, *Planning to Plan*[14] and *People . . . Serving People*,[15] are structured around measurable objectives for public library service in the state. They establish service criteria for identifiable groups of users with special, identified needs for materials. Measurable objectives are set as well for the support services in close relationship to their ability to fulfill the service objectives. Nebraska is defining first class library service as providing "qualified, individual oriented, empathetic, research, reference and resource personnel" and suggests, as an example, that 60 percent of the 71,678 cultural subgroup population of Nebraska be served by first class library service by January 28, 1977. Job-related adults and researchers, it is envisioned, will be served by strong dependence on specialized library resources and services; and by January 28, 1977, 25

percent of job-related adults and researchers will be satisfied by first class library service at the company or organization level, while 75 percent will be satisfied by first class library service at the regional, network, state or federal level. The two brief illustrations above are drawn from the rich fabric of library planning for 1977, presented in such precise terms that full evaluation of the program can indeed be made in statistical form.

Other statewide programs are pouring forth as a result of the LSCA workshops and the move to plan. All offer interesting formulations that will advance evaluation of adult services in an immediate, practical way in local public libraries. The CIPP (Context, Input, Process, Product) model, followed by most of the state plans, has evaluative criteria at the center of the planning effort.

A final factor in improved evaluation of adult services is the change in programs of library education to include focus on evaluation and research. Workshops and continuing education, use of consultants to educate public library staffs in evaluation, as well as improved approaches to evaluation in the basic library education programs of the country have made some contribution. Specific approaches to evaluation of adult services are incorporated in such courses as "Planning Reader Services" offered by Rutgers' Graduate School of Library Service and "Planning Reader Services in the Context of Systems" at University of Wisconsin-Madison. The use, at Louisiana State University School of Library Science and at University of Wisconsin-Madison Library School, of the simulation game Microville, which focuses on planning with measurable objectives, assures that adult services students have an intensive experience with evaluative techniques and measures.[16]

As a major research project, Ernest DeProspo, of Rutgers University, has been conducting a study the object of which is the evolution of measurement of effectiveness of public library service. While the report on this long-term study is not yet available in full, a partial account[17] documents some important facts: that measures will be developed from data that can "reasonably" be supplied by any public library except the very smallest, and that the criteria would have face meaning to the average professional librarian. Measurement indicators include book and periodical availability indexes, records of building use, in-library and outside-library circulation, patterns of reference use, and personnel availability to public users. These indicators have been studied for their meaningfulness both in assessing the local program of service and public services at a regional or national level. The

DeProspo study, when fully available, should have the strength to establish new standard statistical data to be gathered universally from all public libraries, and begin a broad and comprehensive program of reporting from which programs of evaluation of adult services may be elaborated.

Major Evaluative Studies in Adult Services

Major evaluative studies focused directly upon adult services in the United States are few. They do exist, surveying and evaluating at a nationwide level or a statewide level, and broadly inclusive or focused upon one aspect of service. The growth of sophistication in these major studies provides a measure of the advance of evaluation in the library profession.

Each of the studies reported here as evaluative research has avoided many of the common hazards of such evaluation, e.g., countable activities substituted for achievement; stress on effort rather than product; failure to examine critically the validity of program objectives; use of unreliable and invalid measures; lack of control or comparison groups; reliance on authority and expert judgment to establish value of an activity; failure to see the value of an activity in terms of its interaction with other activities to achieve a purpose for the user; placing user purpose or problem as the standard for measurement of achievement.[18] No one of the major evaluative studies in adult services listed below has avoided all these problems, but acknowledgement of these as problems is made in the studies of the 1970s and progress is significant.

Adult Education Activities in Public Libraries (1954)

The checklist or inventory has been an important tool in early steps in evaluation of adult services. The use of the checklist of adult services as a tool for evaluating the state of the art on a national scale was well demonstrated by Helen Lyman Smith (1954).[19] This inventory reported numbers of libraries offering any of thirty-seven services, a diversity of kinds of materials/methods/means for accomplishing these services, as well as analysis of the library units responsible for providing the service and the personnel skills required. This richly textured inquiry provided a basis for local library evaluation and gave the ALA a basis for redirecting its adult services efforts.

The relative unsophistication of evaluation methods used in adult services in 1954 is directly measured by the public libraries' own report. Almost 60 percent reported use of comments by participants, 46 per-

cent the number of persons participating in an event, 42 percent by "demand," 25 percent each by new patrons won or by librarian's "hunch," while the more direct measures of effect such as "changes in attitudes" (6.7 percent), "change in knowledge" (5 percent), interviewing (3.8 percent), trained observers (3.77 percent), and rating scale (.6 percent) had relatively little use.

While there were judgmental values assigned to particular services through a series of weights, these were not developed into a framework for evaluation, nor did the survey attempt to establish from its findings norms or relationships among services that might provide such a framework.

Grant Evaluation Study (1958)

The Fund for Adult Education's influence on evaluation of adult services was significant in requiring major terminal evaluation of their grant projects. In 1958 Charles H. Hewitt prepared for the ALA's Office for Adult Education a descriptive and analytical evaluation of three major programs of adult services carried out in public libraries across the United States during the 1950s: the American Heritage Project, a cluster of "adult education subgrant projects," and the Library-Community Project.[20] While this evaluation employed no statistical analysis of data in the context of program objectives and no assessment of negative effects, it nevertheless drew upon the program records and reports to provide not only descriptions and numerical counts of activities and participants, but also to cite extensively the principles of adult services that were clarified by the project experience, to provide a basis for future evaluation of adult services. The development of evaluative and descriptive statistics for the American Heritage Project is fully reported here; this project represents a nationwide assessment of the impact of this service which is innovative for libraries, new for users, and successful in the view of both libraries and participants. Anecdote and quoted comment are used to illuminate the significance of statistical data. Attention to evaluation and research in the overall assessment of these adult services projects was significant, calling for a long-range effort on clarifying goals, principles of practice, case studies, and evaluative techniques as a basis for building these insights and measures into public library standards.[21]

Development of Methodologic Tools for Planning and Managing Library Services (1968)

The use of "standardized inventories of library services" for pur-

poses of evaluating a library's service program was proposed and developed by Richard Orr, Vern Pings, Edwin Olson and Irwin Pizer in 1968.[22] While the standardized inventory was originally conceived as a tool for precise description of a total program of service, once it was developed its application to evaluation was evolved through establishing a weighting scheme by a panel of judges. Experimentation with this has shown the inventory capable of distinguishing among libraries in terms of quality of over-all program of service. "Adult service" aspects in the precise definition are limited to one category, "Instruction and Consultation," which is weighted relatively low by the medical school librarians in whose libraries the applications have regularly been made.

In its totality, however, the standardized inventory with its evaluation model offers a tool for appraisal of a total program of services that has been profitably adapted to the public library adult service program by Edwin Olson.[23] The major limitation of the inventory as a tool of appraisal is its failure to examine the interaction among service activities and evaluation of the service activities in terms of product for the user. Unless an exact hierarchy of service activities can be established, the inventory will always fall short of sophisticated evaluation.

Survey of User Service Policies in Indiana Libraries and Information Centers (1970)

Olson, in application of the 1968 inventory technique, provided comparative profiles of "readiness to serve" in public, school, academic and special libraries. While adult services were not separated from children's or young adult services, the "User Instructions and Educational Programs" profile shows the possibilities for this method of description and analysis. It is important to recognize, however, that —pathbreaking as this Olson study is for adult services in the context of public libraries—there are flaws in the basic inventory. There is an acknowledged weakness of data-gathering through questionnaire rather than interview, and the researcher warns that the weights established for public library user services should not be considered "representative" of public librarians' judgments but are used only to enable demonstration of the model. All these factors make the reported findings matters of demonstration of a method rather than evaluation of adult services in Indiana libraries.[24]

The limitations of this checklist method of evaluation of programs of service at the individual library level still rest in the fact that it is the interaction among the service techniques or methodologies in terms of the patron's need that truly describes the "service." At state level

(Olson, 1970) and at national level (Smith, 1954), however, the gaps, emphases, and achievements in adult services emerge from use of the inventory. With such national or state norms available from a checklist/inventory approach, individual libraries may construct a rough estimate of the individual library's program of adult services as guidance to constructing a more careful objective-oriented evaluation. Because the Smith study is now twenty years old, and because the Olson study has the limitations cited above, the findings of neither can be accepted as "norms" for even this rough evaluation at this time. But the Olson study provides an excellent "first application" of the Orr, *et al.* approach to adult service evaluation in public libraries.

The Disadvantaged and Library Effectiveness (1972)

Claire Lipsman's recent study, *The Disadvantaged and Library Effectiveness*,[9] uses the case study method to establish a set of criteria against which individual library programs of service to the disadvantaged may be measured and to elaborate a procedure and tools for the use of the criteria. Avoiding the limitations which a questionnaire survey imposed on Olson's study, Lipsman structured a case study style, using interviews with library staff, users and nonusers, and community agencies, that nevertheless derived some of the benefits of survey research through its consistent application of questions around a few themes for inquiry. Generalizable findings, therefore, may be said to have emerged from the study of fifteen public library systems serving the disadvantaged.

With skillful use of discriminant analysis of data on users and nonusers, Lipsman broke open some of the stereotypes about library users to show that they differ significantly from nonusers in their upward mobility orientation, their knowledge of community affairs and resources, and their responsiveness to ideas from many sources in addition to print, and that these elements were more important statistically in distinguishing them from nonusers than the traditional and ever-present data showing income and educational level differences.[25] Such analysis of users and nonusers enables library service objectives to be somewhat more realistically determined. Assessment of service program objectives is one area which Lipsman stresses. She proposes a second approach to evaluation of objectives: the measurement of the gap in perception of library program objectives between library staff, board, agencies and neighborhood.[26]

Lipsman analyzes the kinds of library statistics recording "library outputs" that offer some measure of library impact[27] and proposes a

few useful additions. But most importantly, Lipsman proposes evaluation of programs of service to the disadvantaged through a systems approach to measuring effectiveness. She offers a schematic model that relates each portion of program (objectives, planning, implementation, product, costs) to specific measures of effectiveness and to overall assessment in terms of their coherence and relation to community needs and library goals.

The criteria established for measuring effectiveness of programs of service to the disadvantaged are complex, nonstatistical, and qualitative: (1) community involvement and support of the program; (2) community assignment of status and significance to the activity; (3) user involvement in some form of activity in relation to the use of the service, or at least as "receivers" of programs which have audiovisual or sensory as well as print stimuli present; (4) competent staff for planning strategies for management and leadership, creative programming, knowledge of materials, and interpersonal relations; and (5) autonomy for the project staff within the library's organization. Elaboration and illustration from the case studies amplifies and makes clear the meaning of these criteria, while no attempt is made to develop scales for measurement of a program against these criteria.[28]

As a final contribution to measurement of library effectiveness in this study, Lipsman provides a Program Planning Matrix as a tool to organizing data about program planning, implementation and costs that aid in providing the basis for a rough, but a consistent and comprehensive, measure of program effectiveness.

In short, Lipsman's study carefully approached the total environment of service to the disadvantaged, observed the full situation, developed criteria for success, and created tools and adapted procedures for their application in assessment of such programs. The usefulness of this highly sophisticated approach to evaluation rests to a large extent on the sophistication of the evaluator, but it does not distort nor does it rely on partial indicators for overall evaluation. Refinement of criteria and tools for more widespread application can come later; this report is currently the most advanced approach to evaluation of a services program available.

LIBRARY USE STUDIES

Library use studies as a tool for evaluation of adult services has a long tradition. The familiar count of circulation, attendance at library events, and requests for one service or another have served as indicators that what the library offered was what was wanted. Public library

surveys have included statistics of these sorts, and amplified these counts by percentage of the community registered as borrowers. Measure of the degree of satisfaction users feel in use of the library are taken as rough indicators of the value of services.

To the extent that library use studies indicate the readiness of special publics to use the library, they serve to affirm particular objectives for the adult service program. The marked effect of the 1949 Berelson study of public library users [29] in focusing service to the community leadership and the "communication elite" for a fifteen-year period demonstrates the determinative power of the library use study. Studies of nonlibrary users, to the extent that they indicate the needs and wants of the community, may serve similarly to revise and refocus public library objectives and provide a significant element in the design of adult service programs and in their evaluation.

The Bundy study, *Metropolitan Public Library Users*,[30] was designed to provide generalizable information about public library use since it involved a random sample of users in eight public library systems in Maryland. This generalized information about public library users was seen as providing a standard or norm against which other public libraries studying their users might interpret their findings. At the same time, Bundy used the findings to provide a basis for evaluation and review of goals and services for the aggregate eight library systems whose users were surveyed. The patterns of library use and the reaction of users to services not only provided direct information about needs met and services provided, but also served as indicators of needs not met and forms of service required. Because there was no study of nonusers, nor comparison of the demographic structure of user groups with census data for the area in terms of age, income, education and so forth, the study was not able to evaluate as clearly the excellencies or weaknesses of the library's reach or service. Analysis of the reasons for using the library and reasons for dissatisfaction, when correlated with the backgrounds of the users, gave the clearest indication of the direction of change in services required. Elaboration of the reasons for use in terms of adult service objectives would have provided an even more useful evaluation of this area of service.

The published report of the Bundy study tends to present data about use and users for the total body of users of the eight library systems, producing a general overview. While this indeed was its objective, the overview obscures the individual patterns for each system or branch within a system. For evaluation purposes, separate reporting of data for each system or unit against the background of total figures would

be more effective. Such a survey as this lends itself to more intensive analysis within a library unit or system and would provide a sound basis for refocusing of objectives and redirection of service programs.

In contrast to the Bundy study of users of eight library systems, the *Use Survey Conducted at the Fairbanks (Alaska) North Star Borough Library*[31] (1973) provided data on a single library unit, recorded data about use and users in adult service-oriented categories, and analyzed the data in greater depth for their implications for changes needed in the service program. An additional strength in the Fairbanks study is the availability of comparative data from a similar study done in this library in 1971. Categories helpful in analyzing effectiveness of the adult services program include: types of use of the browsing area; duration of stay in the library by individual users; five age categories assigned to users (preschool, elementary age, adolescent, adult, elderly); use of particular facilities such as copying machines, candy dispensers, listening units; and participation in group activities. Significantly, most of the data about use have been analyzed in terms of three categories of publics: white, native, and black. Analysis of the use of both print and nontraditional materials in both browsing and loan provides a guide to need, especially as increase in use of nontraditional materials is shown over the two-year period from 1971. Charts and tables, as well as verbal interpretations of data, make clear implications of findings. The Outreach Division reported its "library impact" in terms of the number of contacts with individuals in the community in relation to each of its major programs: media, consumer education, early childhood, adults, community information, all-purpose-oriented services. Impact was further measured by anecdote and letters from users who were asked to share in the evaluation.

When such adult service-oriented categories are used to analyze library use and users, the data have direct payoff for the adult service program of a particular library. It is obvious that the program unit (the project, the local library unit, or—at most—the library system) responsible for the adult service program must analyze the data in terms of implications for its own level of policy and program. The Fairbanks study is a good illustration of this.

The 1970 Bonser and Wentworth *Study of Adult Information Needs in Indiana*[32] combines the examination of users and nonusers in a statewide study to draw conclusions on the relative effectiveness of public library service to particular publics whose library needs were assumed to be primarily informational. Farmers, labor and business people were found to view the public library as a source of recreational

and general reading rather than information in Indiana. Only the better-financed public libraries were seen as offering a significant information service to the men who were panel members or respondents to a survey questionnaire. This indirect measure of the public view of the importance to adults of the cultural and recreational service of public libraries invites a more detailed study of effectiveness in these areas. Bonser and Wentworth concluded, in relation to the import of the study for a redirection of public library goals, that unless specific programs were designed to meet the information needs of the "specialized markets," the public library seemed destined to be supplanted by some other organization in this area of service. Only the combined study of users and nonusers could have provided the perspective and challenge to reexamination of library objectives inherent in this study.

A third area of library use study emerges in Zweizig's doctoral research study, "Predicting Amount of Library Use: An Empirical Study of the Role of the Public Library in the Life of the Adult Public"[11] which tests social and psychological factors, as well as reading and education as predictors. Close in style of research design and assumptions to the 1968 Rees and Paisley study, "Social and Psychological Predictors of Adult Information Seeking and Media Use,"[33] the Zweizig study applied the search for predictors to library use by developing an index of library use that was a composite of information, general reading and social aspects of use. This study signals the emergence as library use predictors of such new elements as readiness to use professional sources (or experts) as sources of information, and open-mindedness, as well as confirmation of such elements as amount of book reading, amount of education and amount of community involvement as important predictors of library use. These new elements as correlates of library use suggest measures of program effectiveness or revision of program objectives in the adult services program.

Further, Zweizig's separation of moderate users from frequent users and nonusers, and discovery of separate predictors for this group, suggests a more careful tailoring of modes of adult services for specific levels of library users, and, concurrently, greater discrimination in evaluation of services as they are designed to reach these distinct levels of users.

Library use studies, as they come to utilize sociological and psychological measures, suggest both a refinement of library service programs along the lines of their findings and an experimentation in

the use or adaptation of these measures for evaluation of the services program.

CASE STUDY OF PUBLIC LIBRARY ADULT SERVICES

Effective use of the case study method of evaluation of adult service programs was seen in the work of Lipsman in *The Disadvantaged and Library Effectiveness*.[9] A comparably effective study of five libraries' adult services programs was done by Eleanor Phinney (1954) in *Library Adult Education in Action*.[34] Both studies used individual case studies as a method of arriving at guiding principles and criteria for evaluation, hoping to extend the benefit of this evaluative research to library service programs beyond the cases themselves. They relied on use of several cases to arrive at generalizations.

Although Phinney examined the total adult service program of each library studied and Lipsman examined only that portion of the adult service program related to service to the disadvantaged, both used the case study method for its best contribution: description and analysis of adult services program in terms of the interaction among the service techniques and methodologies. Actually, the findings of the Lipsman study in terms of criteria do not contradict, but do creatively amplify the findings of the earlier Phinney study, demonstrating perhaps the usefulness of the Lipsman focus on services to a particular group of users, i.e., a special public.

The case study of the Enoch Pratt Free Library prepared by Lowell Martin in four reports[35] is fundamentally a series of examinations of implications for the library service program drawn from an intensive user/nonuser study in Baltimore in 1961. The third report in the Deiches Fund Studies of Public Library Service, *Baltimore Reaches Out: Library Service to the Disadvantaged* (1967),[36] deals directly with an area of adult services. This report is based on general knowledge of the Enoch Pratt Free Library and makes no attempt to evaluate in precise terms the current program of adult services. Rather, it projects from a few basic facts about the users and nonusers, by educational levels, the need for special adult service programs to meet the needs of adults of limited education. As a case study, it offers guidelines to development of programs for any public library and thus provides a kind of measure of effective program development. Perhaps the most significant contribution of this report is the fact that the amount of data is less significant in evaluation than the readiness to take the measure of the gap between stated library goals and the limitations of the adult service program as a real challenge to change in the program.

Next Steps in Evaluation in Adult Services

There are basically two purposes for evaluation of adult services programs: (1) to provide a basis for program readjustment and redirection to fulfill library goals more effectively, and (2) to provide an account of achievement that justifies continued financial support of adult services. Neither one of these purposes can be allowed to ignore the other. The measures of effectiveness of adult services programs that serve one purpose also tend to serve the other. Impact of adult service programs on community problems, user satisfaction, community appraisal and cost efficiency suggests areas for measures of equal and sustained importance. Factors in determining initiation, continuance and modification of programs include: relevance (the relation of the service to community needs and interests), significance (the relation of the service to library philosophy and goals within the community), acceptability (the readiness of the users to use and the supporters to support), feasibility (the availability of resources of personnel, materials, etc.), and achievement (capacity of the service program to meet the need). Evaluation, then, must take these factors into account, using as often as possible statistical measures of qualitative effectiveness and social indicators of impact.

The field of adult services over the last three decades has regularly turned to the expertise of the field of adult education for invigoration of its philosophy, program concepts, and evaluative expertise. Wilson Thiede, Professor of Adult Education at the University of Wisconsin-Madison, has been spokesman to adult service librarians in the area of evaluation. His categories (1968, 1972) of evaluative measure (judgments by learners and administrators; behavioral objectives; adoption of new behaviors and practices by learners) are developed in the framework of education, but have simple and direct applicability to library adult services with easy translation of terminology.[37] It is clear, however, that such evaluative approaches are useful only when adult services are seen to be purposeful in terms of their use by individuals in the community and to the meeting of community needs and the solution of community problems. There are two significant developments in public library adult services that move in this direction.

Ralph Beals (1943) defined the public library's role in adult education/adult services as the "infusion of authentic information into the thinking and decision-making of the community."[38] This is, indeed, the objective of the new "neighborhood information centers." Proper evaluation of these community services, often housed in "community action centers," requires analysis of the total environment

within which the information service operates. Major elements in provision of community information that depart radically from traditional reference service and that incorporate an adult services rationale include:

1. close cooperation with community agencies, both in terms of receiving clients and referring them, and in terms of regular flow of information on which the library and the agencies base their services;
2. active program of stimulating the use of the service in the neighborhood, with the library seeking out residents in need of information and bringing them to a level of readiness to use the information in an effective style, and adapting the form of information to users' needs;
3. organization of a neighborhood advisory committee, which shares in policy development and guidance of growth of the program; and
4. recruiting, training and supervising volunteers and part-time/full-time paraprofessionals from the community who serve as frontline service personnel in provision of information.

These above elements of service programs are inherent in all major service programs involving information and referral centers. A significant example of these is the five-city experiment in Atlanta, Cleveland, Detroit, Houston, and Queens Borough. The proposal for this project, developed by Dorothy Ann Turick, focuses on evaluative research: *A Proposal to Research and Design Criteria for the Implementation and Establishment of a Neighborhood Information Center in Five Public Libraries in Five Cities . . . Final Report* (1973).[39] While the evaluative design and measures are still being developed, the report of the first aspect of the study builds the above concepts into the objectives; measures of these typically adult service-oriented objectives and methodologies will inevitably be developed in the continuing project.

A comparable project now funded for segments of the public libraries in New York City developed its thinking on evaluative measures to a high degree in the *Proposal to Create Citizens' Information Centers in New York City* (1971), prepared by Administration and Management Research Association in conjunction with the Brooklyn Public Library, The New York Public Library, and the Queens Borough Public Library.[40] This detailed plan for evaluation stresses such research issues as: What amount and kinds of information are needed to make crucial life decisions? What are the relative assets and liabilities of paraprofessionals and of professionally trained staff in the community

information service? What kinds of intervention are appropriate for an information center? How much assistance can and should be provided within the confines of the basic objectives of an information and referral service? What changes in attitudes toward self and community occur in relation to increased access to information? Such issues relate to social change process, to human growth and development, to human relations within a library staff and in a community. Criteria and measures evolved in this program will be of major importance to the adult services field. Specialists in sociological research have been involved in the design of both the New York City and the five cities project.

The New York City project stresses not only process criteria but also product criteria. The process-evaluation model developed by the Outreach Leadership Network of New England (1972) will prove invaluable to these experimental neighborhood information service programs, as will the more product-oriented evaluation measures developed in the information-giving field. Both process and product evaluation for community information services have clear, measurable objectives within their grasp and the library contribution to solution of community problems in terms of providing relevant, effective information provides a basis for measurement of "library impact" as well as of "library output."

In addition to these developments in the area of community information centers, the evaluative approaches now being taken by the state libraries of the United States will have an even more pervasive influence on the readiness and capacity of public library adult services staffs to develop competent evaluation of their programs.

The statewide library planning now taking place under the leadership of the U.S. Office of Education's Bureau of Libraries is enabling some state planners to focus on service to special publics, and to require public library systems to account for their activity in evaluative style in terms of meeting needs of publics. Typical in approach and excellent in achievement is the above-mentioned Nebraska five-year state plan, *People . . . Serving People*, which establishes criteria for service to special publics in terms of collections tailored to clearly identified individual needs and in terms of "empathetic, people-oriented staff" who can respond to these needs, provide "assistance and guidance to use library materials" and work with local residents in planning the facilities for service to cultural subgroups.[41] The concept of "integrated services" focused on such social needs as drug abuse education, early childhood education, environmental education and aging. It places evaluation of the adult service program in a sophisticated

framework of interactive service techniques and methodologies whose impact must be evaluated in terms of community change.

While not all statewide plans for library service are couched in terms of objectives focused on service to the ultimate consumer, a number include aspects of planning in these terms. Their development of criteria and measures of effectiveness will infuse the public libraries in their states with knowledgeability and practice in using such criteria and measures for adult services.

Beyond the leadership of state libraries in the adult services field, however, the now-universal state library practice of planning in systematic style will have set the pattern for such planning at system levels and eventually at local unit levels. Because evaluation is built into such systematic planning, the practice of developing measures and indicators to justify and evaluate services will strongly influence the adult services field.

While direct attention to evaluation of adult services, has been a phenomenon since the 1940s with the Flexner and Hopkins objective evaluation of *Readers' Advisers at Work* (1941),[42] the Fund for Adult Education in the 1950s and the U.S. Office of Education's Bureau of Libraries and Educational Technology in the 1960s exerted pressures to sustain the effort. Growing sophistication of public librarians in research techniques, state library requirements, and local government mandates for agency accountability have been additional influences in shaping what is now becoming an evaluative approach to planning and conducting adult services.

The sophistication of the field of adult services itself has been an important factor in enabling the development of evaluation practices. Agreement on goals, a body of principles for the practice of adult services, evolution of purpose-oriented services, and mobilization of sociological and psychological research skills for use in adult services are now well underway. As these elements of the adult service field mature, evaluation will become effective. It seems likely that the mandate to evaluate may force growth of these four major elements.

For the 1970s, adult service librarians will look to the groundbreaking studies of Orr, Olson, Lipsman and others to set models for evaluation, and will feel the hot breath of local government and of state and system libraries as they speed their experimental local attempts at developing measures and indicators to show that adult services are meeting individual and community needs for educational and cultural growth and enjoyment.

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Evaluation of Public Library Services to Children

PAULINE WINNICK

OVERVIEW

THE NEED FOR an adequate survey of children's library use was expressed in 1950 and still is unfulfilled. Lacking a national evaluative study, as well as resources for evaluation, there is no way to describe the national condition of public library services to children, performance levels, or degree of impact on child and community.

Until a national study becomes a reality, it is productive to gain whatever data and insights are provided by the existing studies reviewed in this article. Using a pragmatic approach, evaluative studies have been selected for their findings and as illustrations of types of evaluative research. Where possible, utilization of the research is included. Statewide evaluations and evaluations of summer reading programs address children's services specifically. In studies of two urban libraries and in studies of two national concerns—reading effectiveness and work with the disadvantaged—children's services are considered. The evaluation of the public library/school library relationship is presented with the promise of pilot programs whose effectiveness will determine, in one state at least, the designation of responsibility for children's services in both types of libraries or in one type of library.

The concluding recommendations suggest a community-based evaluation, certain priorities and inclusions, and underline the need for developing criteria for measuring the quality of children's services in public libraries and evaluating program impact on users. These recommendations presuppose new interest by and new training of children's librarians in evaluation skills. If the excellence of children's librarians' evaluation of books can be turned to the evaluation of

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library services and reading impacts on users, then there is a bright beginning for the large task ahead.

RESOURCES FOR EVALUATION

Children's services in public libraries have received unmeasured praise from historians, librarians, and social scientists. Robert D. Leigh in the general report of the Public Library Inquiry, *The Public Library in the United States*, summarized:

> Altogether, public library service to children and young people is an impressive achievement. In the last fifty years library schools and libraries have developed children's librarians of great skill and personal effectiveness, with an expert knowledge of children's literature. In many places they are in advance of school teachers in the latter respect. Not only are the children's librarians expert but also in the community they are recognized as such. Thus, children's rooms and children's librarians have been the classic success of the public library.[1]

Earlier, Leigh had compared children's use with adult use of books, libraries, and other agencies of communication:

> The number of children and young people in school who use the libraries is larger in proportion to their total numbers in the population than the proportion of adult library users to the total number of adults. The best estimates indicate that about one third of the former use the library, compared with one tenth of the adults (use being defined as the borrowing of a book once a month or more often). In most communities library registration of juveniles is also proportionately higher than adult registration, usually averaging nearby 50 percent of the juveniles in the population compared with the average 25 percent registration of adults. *These figures for juveniles are not based on as reliable or as comprehensive studies as those made of adult library use. And as yet there are no reliable estimates stemming from adequate surveys, of the comparative use by children of books, magazines, radio, newspapers, and movies.*[2] (Emphasis added.)

Because the Public Library Inquiry's nineteen studies did not include a study of public library service to children, the then Children's Library Association of ALA defined the need[3] and—with ALA reorganization and a funding search intervening—brought forth in 1963 a study by Elizabeth H. Gross. This report, *Children's Service in Public Libraries: Organization and Administration*, is based on information gathered in 1957-58. In itself not evaluative, it was to be the first of a

proposed series of studies aimed at surveying and evaluating public library service to children. Gross states: "It was not the purpose of the study—or of this book about the study—to determine what kind of organization or administration is most effective in attaining the objectives of library work with children, although the study does provide one of the necessary factual bases for this and other evaluative studies as a natural outgrowth of its exploratory and introductory role."[4]

The studies that were to follow, under the aegis of the ALA, did not materialize. A pilot study of public library programs and services to children, young adults, and adults was field tested in the mid-1960s by the U.S. Office of Education but lacked the priority necessary for funding. Thus, as of 1973 there was neither a quantitative nor qualitative national study of children's services to provide a base line of information. Additionally, there are no national quantitative standards for children's services in public libraries to offer criteria with which to evaluate library performance.

Standards for Children's Services in Public Libraries defines its scope in the introductory statement: "Because of the temporary validity of quantitative standards and the lack of supporting evidence of them, this statement expresses qualitative standards only."[5] To implement this statement, the New York Library Association's *Standards for Children's Services in Public Libraries of New York State* undertook to "formulate quantitative as well as qualitative standards for children's services in library systems and public libraries in New York State."[6] It should be noted that in 1961, preceding the publication of the ALA and NYLA standards, the California Library Association's Children's and Young People's Section had taken the lead and produced "Standards of Service to Children in Public Libraries of California."[7] These standards were in quantitative terms and were cited as guidelines by the ALA subcommittee for the task of creating national qualitative standards.

Without national evaluative studies or quantitative standards for measuring public library service to children, the use of recurring statistical information could illuminate the condition and document the development of these services. As of 1973, no data related to juvenile resources and services have been included in the series of selected statistical data for public libraries published by the U.S. Office of Education, most recently in 1970, *Statistics of Public Libraries Serving Areas with at Least 25,000 Inhabitants, 1968*.[8] In process is the survey for fiscal year 1971 which for the first time will include statistics on juvenile collections and loans.

S. Gilbert Prentiss gives guidance on the viable use of library statistics:

> All library statistics should be judged against the rule that they ought to relate as directly as possible to the measurement of library services and how those services are used. They should help in some way to answer the question, "Are we really accomplishing the defined objectives of our libraries?" Library statistics of today, however, and even library standards, deal almost exclusively with the library's capacity to perform rather than its actual performance.[9]

The report of the National Advisory Commission on Libraries reinforces this point: "Perhaps it is not too soon to propose the criterion of social value as the most important in decision-making—whether for broad central planning, more specific planning, or immediate problem-solving."[10] Thus, behind the question of what statistics to keep lies the even more fundamental question of the library's function.

Children's services as part of the continuum of public library services to the total community suffer equally—or more equally—from the lag to define objectives, provide current statistics and standards that can be used to measure performance levels, and answer to the community in terms of the social value of their services.

The resource of research has been examined by Marion Van Orsdale Gallivan who identified for the Research and Development Committee of ALA's Children's Services Committee studies on library services to children, from preschool to age 14, published between 1960 and fall 1972. There are thirty-two studies described under "Research on School Libraries" and fourteen under "Research on Public Libraries' Service to Children." Included in the latter group are studies of total public library service that cross all age groupings. Gallivan observes: "The scarcity of research on public library service to children is very unfortunate. In a period of economic setbacks and taxpayer revolts, a crying need exists to identify, examine, and evaluate library services to children. No doubt, lack of funding available for such research is one major reason few studies have been undertaken."[11]

STATEWIDE EVALUATIONS OF CHILDREN'S SERVICES

New York, Ohio, and North Carolina offer studies, as described below, that illustrate diversity in objectives, strategies, scope, yield, and interpretation.

Dorothy M. Broderick, as State Consultant for Children's Services in New York, worked with children's consultants and coordinators of

cooperative and Metropolitan library systems to initiate the survey resulting in *A Report on Children's Work in Selected Public Libraries in New York State.* The survey's objective was "to discover what is being done, how well it is being done, and what factors influence the quality of library service."[12] A questionnaire (not included in the report) was sent to a sample of 208 libraries serving 25 percent of the state's population and reflecting the size of libraries in the state and their administrative patterns. In reporting the findings on the book collection (quantity, quality, scope), stimulating use, and miscellaneous findings, Broderick did not limit herself to statistical revelations. Her evaluation is expanded by on-site observations and the exercise of her role as advocate. The usefulness of the report as a guideline in achieving excellent service to children is evident. The report was cosponsored by the New York Library Association's Children's and Young Adult Services Section, and became the impetus for the section to formulate the quantitative state standards for children's services. This remains a unique effort to provide a foundation for statewide development of children's services. From the "Observations" section of the report:

> The single most important fact gleaned from the mountains of statistics is that a library can be as good as the librarian and the Board of Trustees want to make it. There are good libraries in all population categories and the idea that the small library cannot give service is dispelled.[13]

In 1967, Joanne Wolford, the Children's and Young People's Consultant at the Ohio State Library, surveyed the children's book collections and library services available in Ohio public libraries. The libraries were categorized into five groups, according to the size of their total book collection. Of the 259 libraries polled, 144, or 55 percent, responded, providing data on book selection policies and practices, upper grade limits for use of children's collections, budget allocations, number and type of programs offered, and activities to stimulate library use. The data were reported and interpreted almost two years later in "Children's Books and Services in Ohio Public Libraries"[14] by Margaret Poarch who succeeded Wolford as state consultant.

For insight into possible means for improving and extending early childhood instruction and children's library services, the North Carolina Central University (NCCU) survey, published as *A Report of the Results of a Field Survey of North Carolina Public Libraries with Regard to Their Services to Young Children*, sought to define the extent of library service given to young children (ages 3 to 5 and 6 to 9) in North

Carolina; to identify the children who were reached by the service; and to identify the people offering the services.

A random selection of thirty-six public libraries was made, representative of the eight state education districts, including libraries with wide variance in size of population served, with different sources of support, and those within and outside library systems. A questionnaire (included in the report) and on-site visits provided the data on the availability and accessibility of services, the purpose of the programs, sources of funds, program housing and adequacy of site, planners (kind of planning) and other agencies involved in planning. The target area of evaluation is services offered to young children.

The report's first conclusion is that "most librarians do not see education as a purpose of service"; and as the final summary states, "the data presented support the conclusions drawn from the first survey of public library service to young children (*Evaluation Report for Institute for Public Libraries in Service to Young Children*). In short, there is a shortage of creative, innovative service to children caused by the shortage of trained, qualified personnel and the shortage of funds."[15]

These statements notwithstanding, there are documented signs of hope: 61 percent of the libraries hold picturebook times for preschool-age children; 53 percent circulate phonograph records; and 75 percent of the libraries visited "do hold special programs for children . . . ranging from a low of 4 to a high 653" in a twelve-month period. The NCCU report has not only provided an information base for its unique early childhood library specialist program; it has evaluated services within its state to young children, their parents, youth-serving agencies, and the concerned community.

EVALUATION OF SUMMER READING PROGRAMS

Each summer, thousands of children are activated to read public library books—usually ten as a goal—to earn a certificate or other form of "exterior reward." Many children's librarians have seriously questioned the validity of the "summer reading club." In a recent issue of *Synergy*, Melina Schroeder's brief article, "Children's Lib," suggests a series of queries to aid in the evaluation of a summer reading club. Central to her message are the questions: "Are we unthinkingly going along with our consumer-oriented society, giving more value to quantity than quality: Are we more concerned with the quality of children's reading, library, and life experiences, or with circulation statistics?"[16] For adversaries and advocates, three summer reading programs provide as many approaches to evaluation.

Fiesta in Oklahoma is a report by Mary Ann Wentroth, Children's Consultant, Oklahoma Department of Libraries, who designed the fourth statewide summer reading program (1972) around the theme Fiesta de Libros to bring attention to the Spanish and Mexican traditions, arts, contributions, and celebrations. Participating libraries receiving the colorful promotional and bibliographical materials and the valuable program manual had to agree that no rewards would be offered for quantity reading, that a child who managed to read one book was "as much a participant as the one who read ten or a hundred. Many children participated in the activities without reading or recording his reading at all."[17] The result was that 157 libraries in 67 counties involved 28,054 children aged 6-13 (representing 6.6 percent of the total K-6 population) in the fiesta. The cost of the program was $4,747.20 and the cost per child was 17 cents. The degree of knowledge and understanding of Spanish-speaking people gained by the young Anglos and the self-pride generated in the Spanish-speaking youngsters could not be estimated.

The Effects of the Vacation Reading Program on the Gain or Loss in Reading of Selected Third Grade Children[18] derived from an experiment designed by Margaret Fife. The hypothesis was that children in the third grade who participate in the vacation reading program of the Atlanta Public Library will maintain or possibly improve their reading levels during the vacation months. Three schools, selected for the high degree of successful participation by children from these schools in the previous year's vacation reading program (1962) provided the population, six third-grade classes. The reading abilities of 107 children in the experiment were tested before and after the summer vacation. Of the 30 children in the experimental group who voluntarily participated in the vacation reading program, 60 percent gained, 30 percent lost, and 10 percent maintained their reading levels. Of the 77 third-graders in the control group who did not participate, 59.7 percent showed losses in reading ability during the summer months while 14.4 percent maintained their levels and 25.9 percent gained in reading ability. The hypothesis was proved.

This vacation reading program points up the value of cooperative program planning and evaluation by public library and public school. Other findings and implications are part of a masterly presentation. Undoubtedly this research influenced the addition of a full-time librarian in each of the twenty-one summer schools of the Atlanta public schools in 1965, and the opening of thirty additional school libraries "so that other children without public library facilities may participate

in the vacation reading programs."[18]

"The Report of Summer Reading Club Conducted by the Regional Library for the Blind"[19] is an unpublished internal paper that provides another dimension of experience in children's services. The Regional Library for the Blind in Washington, D.C. served visually disabled school-age children living in the District of Columbia, North Carolina, Maryland, and Virginia. A summer reading club was designed that could utilize the mail in reaching the participants with books in braille or large print. Children from residential schools, those registered with the library as braille readers, and young people in summer group activities for the blind were encouraged to join. The club theme was "Catch A Flying Fish." Children were given the option of selecting their reading from catalogs (with help) or submitting age, grade level, and subjects of interest, in order to have books selected for them. Of more than 250 children who participated in the Summer Reading Program, 154 chose the latter service. From information about the readers submitted by teachers, school librarians, and parents, the data have been collected and analyzed. The summer readers ranged from grades 1 through 12, with the largest group (42.8 percent) in grades 7 to 9. Only one participant read above average, and 31.1 percent were found to be reading significantly below the "normal" level for their age. Other findings include reading preferences and the degree of sightedness of the summer readers. The need for easily read, inviting materials of high interest, with emphasis on nonfiction (60 percent requested books of fact) was documented for the regional library and for all who serve visually handicapped youth.

EVALUATION OF URBAN LIBRARIES

Two landmark studies by Lowell A. Martin examine public library effectiveness in urban settings. Their research strategies, findings, and recommendations include children's services in significant measure.

Baltimore Reaches Out deals with the practical task that the Enoch Pratt Free Library "can and should" assume in attracting the community's poor and uneducated people and providing them with genuine help, given the present condition and cultural position of the older American city and the place and mission of the city's library. By structured hour-long interviews in a sample of 1,913 households selected from the total Baltimore population, trained interviewers gained information covering 6,314 adults and children about "how people spend their time,"[20] particularly on reading and library activities. The disadvantaged were identified by their income, education, cultural isolation or a

combination of these factors. (Selected questions from the interview form are included in the study.) Analysis of readers and nonreaders showed that "the determining factors in reading extend all the way from the conditions in the home at birth to the extent of participation of the individual in life beyond his own family and street as an adult."[21]

Specifically, "a child in a reading home is at least three times as likely to be a public library user as a child in a home where neither parent reads books,"[22] and the activity of reading in the home outweighs in importance the mere presence of books: 63 percent of the readers remember being read to as children. Large and hopeful exceptions abound: almost half the identified readers come from homes that were not "bookish," and "nonreaders" do indeed read. In proposing for Pratt a directed outreach program for all ages, priority is given to younger children, ages four through six, intensifying the personalized children's service that has been developed. "At bottom the decision to reach out or not to reach out to the culturally deprived is a matter of social value more than a matter of efficiency or logic."[23]

Library Response to Urban Change: A Study of the Chicago Public Library is an impressive analysis of the complex, distinctive city that is Chicago and the condition of its urban library, presenting a short-term and a long-range plan for renewed service. This is a clear "call to excellence *and* to innovation."[24]

"The Chicago Public Library is to a significant extent a children's agency."[25] It reaches 41.7 percent of all Chicago children aged 5-14. (The library serves 22.3 percent of the total city population.) The branch libraries are essentially children's libraries. The problem of a declining juvenile circulation—a 21 percent drop between 1960 and 1968 despite an increase in the number of children—remains unsolved, but many clues are offered for further research. The direction for the immediate future is the intensification of library effort to serve children under strengthened administrative leadership. The future balance of school library vs. public library responsibility for elementary school children's total library needs is to be resolved by 1980 if high-level relationships and joint planning in the intervening years can be effected. The variety of research methods used—traditional and experimental—are described and data collection instruments provided. However skilled the research, this study is illuminated by the social sensitivity of the research team.

EVALUATIONS OF PUBLIC LIBRARY PROGRAMS IN THE UNITED STATES

If evaluation is to improve, not prove, the two studies which follow

furnish findings on reading and reading-related programs and on programs for urban disadvantaged persons that can improve program planning and increase program effectiveness for all public libraries. Data collection instruments are provided in both studies.

A Study of Exemplary Public Library Reading and Reading-Related Programs for Children, Youth, and Adults presents as case studies thirty public library programs that show impact on the participants' interest in reading, behavior in reading and in using the library, and gaining knowledge or adding skills in the use of printed material. These programs were selected for in-depth study from 128 eligible programs by the application of sixteen indicators and three guidelines. They cut across socioeconomic groupings, urban and nonurban settings, age groups, levels of literacy as well as levels of cost, sources of funding, and type of program activity. Among the thirty programs are seven serving preschool children and seven reaching the elementary school age. In each case there is a description of the program, of implementation, and program costs; a second section analyzes the impact of the program on its participants, the sponsoring library, and the community. Descriptive data were collected mainly by telephone survey, on-site observation and interviews of program staff, and three sets of respondent questionnaires for sampling present and past program participants. Also, a related program survey was developed "to provide information concerning the community and library context of the program," since "of primary concern were the extent of local knowledge about the program, the extent and types of cooperation or conflict within the program, the general organizational climate surrounding the sponsoring library and program, and outside views of the program effectiveness."[26]

The primary means of determining program impact, however, was the analysis of interviews with program participants. Twenty of the thirty effective programs were selected as exemplary in meeting reading and reading-related objectives at reasonable costs in relation to the extent of participant impact. There are valuable insights throughout the study such as:

> Preschool programs which provide activities for both preschool children and their mothers scored higher on the effectiveness measure than programs limited to preschool children.
>
> . . . . . .
>
> Measured effectiveness varied little according to the economic status of participants, or the current source of program funding.[27]

This study is a breakthrough, demonstrating that it is possible to measure the costs and the specific benefits derived by each child who is a participant in the library program, and to involve the parent as the evaluator.

The Disadvantaged and Library Effectiveness is Claire K. Lipsman's response to a request by the U.S. Office of Education for "a study which would illuminate the problems of library service in urban low-income areas by examining a cross section of program approaches, target groups, and scopes of effort"[28] in order to learn how these services could be strengthened and their effectiveness measured. The study uses elements from both case study and survey research. In each of fifteen cities, library programs and practices were examined with the focus on the neighborhood served by a branch library or special library project. Data were collected in four subject areas:

1. the needs and interests of the community residents, both library users and nonusers,
2. library services in relation to other available community resources,
3. the nature and scope of the neighborhood library program and its relation to the rest of the library system, and
4. available measures of impact or effectiveness of the program.

The development of a cross-program analysis followed "to identify common elements or factors critical to program outcomes and to develop possible criteria and techniques for assessing program effectiveness."[29] Four criteria are suggested as the standard for evaluation for programs to be "optimally effective":

1. Program objectives should be related to individual and community needs, i.e., to user requirements.
2. Program planning and implementation should carry forward program objectives.
3. Program output should reflect the achievement of program objectives and hence the satisfaction of user needs and requirements.
4. Program inputs (cost) should be appropriate to the level of program output.

Certain recurring program elements are found to be highly correlated with program effectiveness: (1) competency and effectiveness of staff; (2) degree of community involvement and understanding of community dynamics evidenced by project; (3) degree of autonomy exercised by project director in decision-making; (4) quality of materials used; and (5) effectiveness of publicity, or project visibility. Recom-

mendations include coming to terms with the imperative need for better data collection as part of the program-planning and budgeting approach and offer suggestions for the collection of three types of data "fairly easily." Although children are not singled out for special study, they are highly visible as library users. In ghetto areas, two-thirds of the library users were under nineteen years of age and one-third of the users were twelve and under. The younger children come to the library more often than the older ones; 70 percent of the twelve-and-under group come at least once a week. The reason given most frequently for coming to the library is related to school work. Of the young children, 80 percent live within six blocks of the library, and 90 percent of them walk. The lack of adult use of libraries in low-income areas stands in sharp contrast to children's use.

Lipsman is concerned with the social utility of libraries, and the findings of her study allow her to question the value of the present urban public library as an institution capable of meeting the functional service needs of the disadvantaged. Because the report is critical of much that was observed, the individual programs and cities are not identified. Yet her skills and imagination are exercised generously to help public libraries achieve new directions in the fields of education, information, recreation, and culture. The stress is on coordinated planning with other institutions, beginning with the statement that "the need for more effective integration of public libraries with schools at all levels is strong and clear."[30]

Lipsman believes that "only through adequate evaluation can the adaptation or shaping of library programs be responsive to social and political needs and successfully meet major service objectives."[31]

EVALUATION OF THE PUBLIC LIBRARY—SCHOOL LIBRARY RELATIONSHIP

The Philadelphia Student Library Resources Project, sponsored by the public, parochial, and private schools and the Free Library of Philadelphia, has established The Action Library, an inner-city student demonstration center for children in south-central Philadelphia. This library is the result of an extensive research investigation to determine the needs, the availability, and the use of resource materials for both school work and recreation by children in all types of schools in Philadelphia. The research revealed that as children moved up through the grades, their use of library resources and services declined. The desire to read for pleasure similarly decreased, the longer they remained in school. Moreover, children in low-income areas expressed less need for libraries than did other students and found them

difficult to use. The Action Library seeks to reverse this pattern, offering media, services, and activities designed to stimulate learning. Supported by three federal programs, it is being tested as an effective alternative to the school library and to the public library. As a cooperatively planned, copperatively supported library demonstration for children, The Action Library deserves ongoing attention.

The overwhelming problem of the late 1950s and the early 1960s was the intensity of student use of the public libraries, not the decline of use. In *Students and the Pratt Library*,[33] Lowell Martin defined the concerns and responsibilities of Baltimore's school libraries and public libraries and gathered data in order to formulate recommended action for both types of libraries. The temper of those times can be assessed by the special issues of professional journals[34] devoted to the subject of school and public library relationships, and by reports of the national participation at the ALA Conference Within a Conference, July 1963, in a discussion of student needs for library service. While no solutions through organizational or administrative change were found at that time, a pioneer recommendation was included in New York State's *Report of the Commissioner of Education's Committee on Library Development* in 1970:

> The elementary school media center should have the responsibility and the capacity to meet all the library needs of all children except those in health, welfare, and correctional institutions. (The term "children" in this context is defined as that group of users now served by children's rooms in public libraries—usually pre-school through grade six.)[35]

Following the commissioner's committee report, the Regents of the University of the State of New York issued their *Library Service: A Statement of Policy and Proposed Action.*[36] This recognizes the need for evaluation of service to children and students, for dealing with the many problems involved in the recommendation, and for experimentation. For the purposes of appraising the recommendation, the commissioner of education appointed a task force of personnel from public and school libraries, other educational agencies, and the general public to begin a pilot program. This pilot program should demonstrate a variety of service programs in a number of centers for a period of three years so that the strengths and weaknesses of both school and public library service to children can be assessed. Finally, a report with recommendations will be submitted on demonstrated ways to meet all the library needs of all children, preschool through grade six. *Guidelines for*

Library Service to Children: Pilot Projects was prepared and distributed with the notation, "Since no funding is available in the 1972-73 State budget for pilot projects, no applications are to be submitted."[37]

The direction for change is being set, however, in many minds, in increasing numbers of communities, and in several states. Experimentation with evaluation is almost upon us, hopefully for the benefit of the child with his universe of library needs.

RECOMMENDATIONS FOR FUTURE EVALUATION

For future evaluation, recommendations should include the following:

1. That evaluations of library services to children be community-user oriented to include both school library and public library facilities, resources, services, and personnel; that all other sources of reading available to the children in the community be included as well, to learn how and where the full spectrum of the child's learning needs can be met with the greatest cost benefit.
2. That preschool children, 3 to 6 years of age, be given priority attention in user impact studies of community library services (see above); that new media and new concepts of early childhood education be studied together with traditional activities for the youngest clientele.
3. That "successful" library programs and services for junior high school age young people be identified and evaluated, in order to learn how the library can respond more effectively to the youth of today, beginning with their transition from sixth grade to junior high school status.
4. That evaluations of library services to children in the community include children with special needs: learning disabilities and physical handicaps, the mentally retarded, the emotionally disturbed, and the talented.
5. That there be developed criteria for measuring the quality of children's services in public libraries and for evaluating program impact on users.

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Evaluation of Media Services to Children and Young People in Schools

MARY HELEN MAHAR

Recent Trends in the Evaluation of Education

Media specialists in schools have had contact with evaluation and its instruments for many years—the required reports of state departments of education; the reports, used in accreditation surveys such as the *Evaluative Criteria* of the National Study of Secondary School Evaluation;[1] special evaluations such as that generated by *A Planning Guide for the High School Library Program* by Henne, *et al.*,[2] and the Consensus Study Inventories of the Illinois Secondary School Curriculum Program.[3]

Most of these instruments ascertained, in quantitative terms, existing provisions in materials, staff, services and expenditures, and a few included measurers of quality based largely on empirical judgment. However, they were—and still are—important in establishing base-line data for measurement and comparison, and in structuring and establishing both quantitative and qualitative standards. No evaluation of the present has validity without the foundation of reliable data and statistical norms derived from aggregated data.

However, in the past ten years, under the leadership of men like R.W. Tyler, Daniel Stufflebeam, Robert Stake and Egon Guba, the process of evaluation of education has become more highly developed and has evolved into an applied science. Stufflebeam has said, "Evaluation is defined . . . as the process of acquiring and using information for making decisions associated with planning, programming, implementing, and recycling program activities."[4]

Evaluation now goes beyond the traditional approach of rating exist-

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ing conditions (in the form of data) on some outside norm or standard, and instead determines the extent to which internal objectives are met and through what means. Today's evaluation measures *impact*, going beyond the status quo.

It follows, then, that in any evaluation project concerned with media services in schools, the first step must be to determine the objectives of the media program in the school, and to establish agreement on these objectives by school staff—the principal, curriculum directors, teachers and media specialists. Outside consultants in evaluation cannot help much in that process, because it relates intrinsically to the school's program, but they can assist in structuring the questions relating to the objectives which should be tested or measured. And they can help in the process of determining the form of the survey for maximum effeciveness.

An evaluation which determines impact with validity can be used as the basis for decision-making, and can assist in planning various components of a media program as well as the total program. To illustrate: a school faculty may wish to test the value of scheduled formalized library instruction. When the objectives of such a program have been agreed upon, and the questions to be asked are decided, the impact ascertained in the evaluation process can be a reliable basis for a decision on the continuation, or termination, of this type of instruction.

Impact can be measured in a variety of ways: through standardized tests, planned interviews, questionnaires, observation, or a combination of these methods. No one method is necessarily the only one, or the best. The adaptability of the measure to the question, however, does require careful thought, and sometimes expert advice.

Of utmost importance is the evaluation design. Even for a very modest evaluative survey, a plan must be developed which includes objectives to be tested, data to be collected, measures to be used, data analysis methods, and type of report. For more complex evaluations, the techniques of design employed by experienced evaluators must be studied, such as the CIPP (Context, Input, Process, Product) model devised by Stufflebeam.

For the total evaluation process there are a number of helpful guides in the literature of educational evaluation. A monograph, *Evaluation: The Process of Stimulating, Aiding, and Abetting Insightful Action* by Guba and Stufflebeam, is an excellent introduction to the subject.[5] Popham's *An Evaluation Guidebook* [6] is also useful.

For preparing reports of evaluation, *Preparing Evaluation Reports; A Guide for Authors* [7] published by the U.S. Office of Education is a clearly

written presentation on the subject. It contains an excellent bibliography of materials on research methodology and experimental design, sampling measurement, and data analysis and processing. Books listed are arranged by level of difficulty.

Evaluation of Title II of the Elementary and Secondary Education Act, School Library Resources, Textbooks, and Other Instructional Materials

Since the techniques of evaluation have developed into a highly sophisticated discipline, it may be helpful to school media specialists, teachers and administrators to know how we in the U.S. Office of Education approached the evaluation of Title II of the Elementary and Secondary Education Act, School Library Resources, Textbooks, and Other Instructional Materials. Those immediately assigned to the administration of ESEA Title II were school media specialists, not experts in evaluation, and it was essential for us to have the guidance and assistance of specialists in that field. This support is needed in any evaluation project of dimension; however, some of the mystique surrounding the techniques of assessment can be dispelled by the application of common sense.

From the very beginning, we decided that we must not only have expert advice, but also do very careful planning of the objectives and direction of the evaluation. We began our evaluation program by holding a small exploratory conference consisting of state and Office of Education staff. The state staff included ten coordinators of ESEA Title II in state departments of education; the Office of Education staff was composed of seven media staff assigned to the administration of ESEA Title II, three specialists in program evaluation, and four specialists in statistical analysis.

Our evaluation experts taught us that evaluation is a process for making and supporting decisions. We had been operating on the assumption that the provision and utilization of high quality instructional materials are good; our evaluation could tell us whether this was a valid assumption, and direct us to sound decisions for the future.

The first two days of the conference were devoted to presentations and discussions of ESEA Title II program purposes and achievements; the conference objectives; and identification of information requirements. We sought by these means to arrive at a common understanding of ESEA Title II, its objectives and expected outcomes. Then, in groups, we decided on the questions we would like answered in the

evaluation of Title II, and the purpose these answers might serve; we decided which questions should have the highest priority in measuring impact; we also made preliminary decisions on the methods by which the data should be collected. In all of these deliberations our evaluation experts advised us on the feasibility of questions we wanted answered, and on the possibilities of arriving at credible answers through reputable techniques of evaluation. Our specialists in statistical analysis also advised us on the data we were collecting on annual report forms, and on possible changes in these forms.

We arrived at the following recommendations:

1. The major broad aspects of the program to be evaluated were: (a) the effect of increased instructional materials on the improvement of instruction; and (b) the effect of increased instructional materials on pupil achievement.
2. Other elements of the Title II program which required evaluation as a part of determining larger outcomes were: (a) changing attitudes of administrators, teachers, media specialists, pupils and parents toward the utilization of a broad variety of instructional materials; (b) changing programs of service by instructional materials centers to curriculum and instruction; (c) the quantity, variety and quality of materials acquired in relation to instructional needs; (d) changing methods of utilization of materials by teachers and pupils; (e) effectiveness of the administration of instructional materials, including methods for making materials accessible; (f) adequacy of the provision of professional and clerical staff for programs of service with instructional materials; and (g) the effect of the increase of materials on the improvement of the physical environment of the materials center and other instructional areas of the school.
3. The Office of Education should conduct evaluative studies examining the elements outlined in 2 above through case studies in: (a) schools with special purpose grants for demonstration; and (b) schools with libraries which had none prior to the Title II program.
4. The Office of Education, in cooperation with state departments of education, should develop an instrument for the collection of essential quantitative data by the states. There should be a subsequent Office of Education conference of state department of education personnel for the purpose of obtaining understanding of an agreement on the instrument and its use.
5. The annual report forms should be re-examined for possible deletions or substitutions.

The recommendations for the structure of the evaluation in numbers 3 and 4 above were implemented, except that the overall evaluation recommended in 4 was not done by the states, but by the U.S. Office of Education, and included qualitative as well as quantitative data. The major aspects of the program recommended in number 1 were included in the studies, as well as the other elements recommended in 2. Obviously, this preliminary conference had a high degree of influence on the conduct of the Title II evaluation. Its effectiveness can probably be attributed to a number of elements: the combination of media and evaluation specialists at the very first stage of planning; its workable size; the fact that five full days were given to the deliberations; and the careful documentation of the proceedings and recommendations for follow-up activities.

The conduct of the three parts of the evaluation took a great deal of time and effort. The case studies, for which consultants in evaluation and media were employed, required two years for completion and publication. The national survey was directed by the planning and evaluation staff of the Bureau of Elementary and Secondary Education, and required a national conference and a series of regional conferences with evaluation staff from state departments of education and local school districts on the scope of the study and the survey instruments. The collection, editing, processing and interpretation of the data proved to be highly complex tasks, and the report was not made available until 1972.

The reports of the Title II evaluation are:

Emphasis on Excellence in School Media Programs: Descriptive Case Studies, Special-Purpose Grant Programs. Title II Elementary and Secondary Education Act. School Library Resources, Textbooks, and Other Instructional Materials.[8] Case studies of the outcomes of ESEA Title II in three elementary schools, two junior high schools, one middle school and two high schools which received special purpose grants.

Descriptive Case Studies of Nine Elementary School Media Centers in Three Inner Cities: Title II Elementary and Secondary Education Act . . . School Library Resources, Textbooks, and Other Printed and Published Instructional Materials.[9] Case studies of the effects of ESEA Title II in nine elementary school media centers in Buffalo, Cleveland and Los Angeles.

An Evaluation Survey Report on ESEA Title II–Fiscal Year 1966-68. Part I. Analysis and Interpretation. Part II. Tables, 1972.[10] A report of a comprehensive survey of the impact of ESEA Title II conducted through a sample of school districts in the United States. Includes the survey instruments.

For media specialists in schools considering a media program evaluation, the case studies have the greater relevance. They can help to identify elements of programs to be studied, to develop interview instruments, and to tabulate and report data. These case studies illustrate well the techniques of quantifying subjective data from interviews with principals, teachers, pupils, and parents. Indeed, they also point to the fact that a child's spontaneous opinions of a book, a film strip or a media center may have greater validity than quantified data. The comprehensive survey can be useful to state departments of education, large districts, or institutions and organizations designing surveys of broader scope.

Evaluation of Media Services in Local Schools

Evaluation of media services is taking place in many schools throughout the United States. The evaluation component built into innovative projects under Title III of the Elementary and Secondary Education Act and other federal programs, the new emphasis on accountability, and the heightened interest of the whole education community in measuring the effectiveness of programs have greatly stimulated the evaluation of media services.

A publication of the U.S. Office of Education, *ESEA Title II and the Right to Read, Notable Reading Projects,*[11] is an example of this prevalence of evaluation of media programs. It is a periodical compilation of descriptions of reading projects supported by Title II of the ESEA. Each project description includes the plan of evaluation, as well as the objectives, design, number of pupils served, amount and source of funds, and official to be contacted in the school for further information. To date about 215 projects from 40 states have been so described. Below is an example of one of these projects:

Title: Language Skill Development, Abraham Lincoln Elementary School, Lowell, Massachusetts.
Objectives: To (1) acquire basic habits of reading widely for pleasure and for information, (2) relate the process of reading to content, and (3) increase vocabulary through wide reading, study, and use of media.
Project: Centered in the school library, this project involves students in individual and small group activity, as well as working in pairs. Creative activities include storytelling, utilization of sound filmstrips and tapes, and picture book activities. Library staff and older children are used in the storytelling activity. Instructional resources are used for specific and defined purposes within a series of activities whether assigned or

initiated by pupils. Materials have been carefully previewed or examined by teachers to be sure that they will fit needs that arise or are stimulated by classroom instruction. The program is intended to recognize many different purposes and needs in reading and learning. Content of reading materials follows, as far as possible, the interests of the pupil. However, this is combined with efforts both in the classroom and library to introduce new interests and ideas.
Number of pupils served: Forty public elementary school pupils.
Amount and type of Title II grant: Special purpose grant, $1,000.
Evaluation: Pretesting and posttesting, using the Vocal Encoding Subtest of the Illinois Test of Psycholinguistic Ability; teacher judgment of improvement in vocabulary, listening, communication, and reading readiness skills; and increased interest in books and the reading process.
Further information: Gertrude Bailey, Principal, Abraham Lincoln Elementary School, 300 Chelmsford St., Lowell, Mass. 01851.

The evaluation techniques employed in the projects are widely varied both in methodology and in level of sophistication. The following one from Wellsville, Kansas, uses Kansas University evaluation specialists for the evaluation process.

Title: Using Library Materials to Improve Social Studies Reading Skills, Wellsville High School, Wellsville, Kansas.
Objectives: To (1) improve reading comprehension and speed, vocabulary, and word analysis skills; (2) improve vocabulary in the area of social studies; and (3) develop the ability to use maps and charts to derive information.
Project: Seventeen seventh grade pupils identified as problem readers are being taught social studies and reading with procedures calling for intensive use of print and audiovisual media. Special attention is given to skills needed for reading for information and knowledge. These include learning to identify and understand the meaning of words, selecting and organizing information, interpreting information, and use of information. To develop these skills, pupils will be taught the use of library reference materials; techniques of selecting significant ideas; skimming, outlining, and notetaking; skill in judging the authoritativeness of sources and evaluation of information; how to generalize and draw conclusions; and how to relate facts to other situations. Extensive use is made of the materials selected especially for this project.
Number of pupils served: Seventeen public school pupils.

Amount and type of Title II grant: Special pupose grant, $3,000; basic grant, $588.
Other federal program assistance: ESEA Title I funds, $12,826; and NDEA Title III matching funds for materials and equipment.
Evaluation: Pretesting and posttesting of reading and study skills and comparison with control group; student and teacher "opinionnaire"; judgment of Kansas University consultants.
Further information: Lois Adriance, Librarian, Wellsville High School, Wellsville, Kansas 66092.

Copies of issues of *ESEA Title II and the Right to Read, Notable Reading Projects* [11] can be obtained on request to Milbrey L. Jones, Bureau of Libraries and Learning Resources, U.S. Office of Education, Washington, D.C. 20202.

There have been a few fairly ambitious evaluation projects of media services in individual schools of the United States. One of them is well known—that of Sobrante Park School in Oakland, California. It is described in *An Evaluation Report on the Multi-Media Services Project: Sobrante Park School,*[12] published by Oakland Public Schools. It has some evidence of positive effects on children and teachers through the services of the media center in the processes of learning and teaching. It points to a number of inferences from these effects which require further research. A study of the methodology and instruments used in this survey can be profitable in the planning of a media program evaluation.

Evaluation of Media Services by State Departments of Education

State departments of education have also been conducting evaluation surveys of school media surveys in their states, or making plans to do so. The California State Department of Education has produced *An Instrument for the Qualitative Evaluation of Media Programs in California.*[13] It provides for the collection of both quantitative and qualitative data of media services in schools of the state. The section on qualitative evaluation needs further development, but the publication can be useful in suggesting the preparation of similar instruments for state evaluation of media programs. For states which have never compiled basic data on school media centers, a good model for a first status study is *School Libraries in Missouri, a Status Report.*[14] The data are described with clarity and precision, and the information provided is basic to a future qualitative evaluation.

Most state departments of education have plans for evaluation described in a document required for the ESEA Title II program, *Program and Operational Procedures (POP).* A POP document may include the state's plan for assessment of need, the development of goals and performance objectives, as well as a plan for statewide evaluation. These POP documents can be made available on request to the state ESEA Title II coordinators in state departments of education.

Evaluation is an exacting task. It requires generous resources of time and financial support. It also requires the services of experts in evaluation—even very modest evaluative surveys must employ reliable instruments and techniques. Careful planning of the whole process in the light of both program objectives and aims of the evaluation is essential. It necessitates the involvement of staff close to programs and others who can bring objectivity to the survey. In the field of media services, evaluation, however complex, is greatly needed. To develop these services for the best possible effects on education, many assumptions related to media programs and management should be tested. Through the conduct of in-depth evaluations, we will find reasons for abandoning outmoded practices, and for planning creatively for new forms of media services to education.

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Commentary

KENNETH E. BEASLEY

Requirements For Continued Progress

In this issue of *Library Trends*, an important step is taken toward developing a system of evaluation for library services. All of the authors have presented balanced and well-documented discussions of the successes and failures over several decades in trying to determine the social impact and social value of a library program. Indeed this survey of articles is probably the best summary of the many books, articles, research essays, and personal ruminations outside of faculty lecture notes. It would be presumptuous and repetitive, therefore, to critique each presentation. A more valuable contribution would be to take the summaries and structure a short essay from a general point of view on why progress seems to be so slow in developing an acceptable system of evaluation.

Although the general themes in the literature cited by the authors show a rapidly growing maturity of librarians in understanding and assessing the professional services they offer to the public, the overriding conclusion from all the studies is that there is still considerable groping and uncertainty about which concepts or ideas can be implemented in a manner acceptable to both the public and the profession. Four factors are sketched briefly here as a partial explanation.

1. Basic to the uncertainty, it seems, is that no group has ever truly committed itself to measurement or evaluation, including the professional organizations. State and national associations have advocated evaluation in different ways on frequent occasions, but they have also seemed to assure themselves that no effective action would be taken by insisting on general professional consensus. Even the federal government has taken this posture with its statistical reporting system.

As admirable as consensus is, we are not likely to see implementation of any system in the foreseeable future by this technique because the very nature of library service causes members of the professions to

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identify more with a local constituency for shortrun decisions than with national objectives. Even though library service itself has many common elements, regardless of type of library or location, the profession is in many ways still a coalition of diverse interests which are often in competition with each other to foster individual growth and preserve local independence. How fast it will develop a national mind similar to the medical or some segments of the teaching professions, one can only guess. The problem, therefore, in this transition period is how to deal with heterogeneity in the makeup of the profession (in an economic and psychological sense) when the conceptualization of evaluation is in terms of standardization, similarity, and uniformity.

As a result of this conflict the next step in library evaluation is most likely to be a sudden and almost unexplained crystalization of the thinking of the profession along with the formal adoption of an evaluation program by a state wanting to try something new and feeling secure enough to risk experimentation. Its actions will further a coalescence in thinking in other sections of the profession. Change by national leadership does not seem imminent.

2. Research efforts have had a paradoxical effect on evaluation. While they have provided both specialized and general information for the profession, the results have been more a stimulus for academic thinking than a tool for actual decision-making. For the most part, the researchers have developed first generation evaluation systems which (1) are too abstract, (2) are not fully accepted by the faculty of graduate library schools, and (3) do not come to grips with the problem of defining the goals of the library.

More important, they have often attempted to be pure without understanding that a measurement of a social service is based on values, and that the service itself is aimed at nothing less than furthering a set of values. Therefore, to advocate quantitative objectivity beyond a certain point has little merit; and in many ways the librarians who have insisted on a concurrent discussion of values along with quantitative measurements have been more in touch with the greening of America than the quantitative purists who knew statistics but did not fully appreciate that they were a small part of a social and political reality.

In defense of library researchers, it must be stated that the excesses were probably necessary at the outset in order for library research to overcome its late start and poor empirical base; and, in all honesty, this criticism is in part the self-confession of a person who has encouraged a number of young researchers to be pure.

The articles in this issue suggest rather clearly that researchers must now reorient their thinking and set two new priorities. First, additional single or individual empirical studies and surveys must take second place to synthesizing the great mass of present data and concepts into workable theories. Some of the theories should encompass total library service while others should be concerned with specific programs. Secondly, all those interested in library service must develop some ways to reduce the time lag between the formulation of research conclusions and their general dissemination to and acceptance by the profession. A lag itself, one should recognize, is partly evidence of a healthy development and is to be considered pathological only if the profession does not act to minimize the delay. The present methods of disseminating research data are too slow and are not in a form which encourages librarians to study them. Other professions are also looking for an efficient delivery system comparable to the well-known model of agricultural experiment stations.

3. A careful review of the current literature on library evaluation shows an unwillingness—or inability—of both researchers and practitioners to accept certain assumptions. Without this acceptance, we are never likely to be able to develop models and then make comparative tests of their validity. Assumptions do not need to be completely accurate as descriptors in order to be useful tools of analyses, as Mouzelis has expressed: "Thus it happens that assumptions which may be considered simplifications . . . are good enough for explaining and predicting broader phenomena and for suggesting new problems and hypotheses on the macrolevel."[1] The profession has never hesitated to set assumptions as the bases for standards or formulation of plans, or for making daily operating decisions.

Although an extensive discourse on this subject is not feasible in this commentary, the basic assumptions which are needed can be outlined very briefly as follows:

a. *There are more similarities than dissimilarities among libraries.* This statement is a truism in many ways since the word library defines a certain kind of formal institution. National standards, long run state and regional plans, and even grants-in-aid are based on this premise; but unfortunately at the same time librarians tend to deny the validity of statistical and evaluation programs on the grounds (1) that their library is truly unique, or (2) that their library service is too complex to describe in quantitive terms.
b. *Quantity has a positive relation to quality in a library administered by professionals (i.e., graduates of a library school or persons with long experi-*

ence with other professionals). Professional librarians, for example, do not acquire material on a random basis but rather with the goal to add to the total fund of knowledge available to a constituency or community. They recognize, furthermore, from a common literature, that there are definable basic needs which must be met first in all communities and that then librarires grow as a systematic aggregation of specialized materials which fit more sophisticated local, regional, or even national demands. The pluralistic nature of American library development should never be misinterpreted as lack of direction or absence of any sense of a norm. Where deviations from currently accepted norms occur, certain basic measures show them at once even with the present evaluation systems.

c. *Unlike formal school programs which lend themselves to testing, the specific impact of a library program on the educational process in a community is not measureable with existing methodological tools. Nor can one measure the value of recreational reading.* The concern about measuring them should therefore be forgotten.

The effectiveness or impact of a library program is not even as definable as mental health because in the latter at least sickness or disfunction can be identified. Libraries should merely be viewed as *supportive* in the educational and recreational milieu; and it must be admitted that they need not be *used* by a person in order for him to become or remain socially functional. They are, however, a demonstrably economical way for society to provide an opportunity, in that the storage and acquisition of material on an individual basis would require extra allocations of scarce resources and would socially tend to make knowledge a private preserve. It is the opportunity, therefore, which has the value and which should be measured if possible.

d. *All outreach programs as they are now defined are equal in importance or value.* Their purpose is to modify social structures and values and they are justified on the basis of moral precepts. Even though rehabilitation of a ghetto has an obvious economic advantage and usually enhances political stability, a library program for it can still be justified in terms of freedom of the individual even if the other two conditions did not exist. Outreach programs, moreover, are a long-term investment in society and for the most part can be measured only in the time span of a generation; given the proper philosophical base, one cannot say with certainty that one program is better than another except in a social context much broader than library service.

e. *The effectiveness of a library is a function of the ability of a library to supply information under conditions which encourage further use.* Indeed this is the only statement of purpose or goal which is needed for a library. All others are redundant. A library is an activist agency only to accomplish this objective. Theoretically, there is no upper limit to effectiveness as defined here, but in a practical sense there is an individual and collective social limit based on the amount of time available for use of the library in competition with other demands on time.

f. *Related to this concept of effectiveness is that the library must be free and open with only minimal restrictions on acquisitions and storage.* Any restriction beyond those necessary to maintain the internal integrity of the library is a limitation on opportunity and by definition reduces its effectiveness. Normal budgetary restrictions operating in the annual allocation of money are not a part of this concept since the purpose of evaluation is in part to determine what would occur if a given level of funding were increased or decreased. However, budgetary policy which sets a fee for use and thereby prevents certain uses or requires a user to rank his uses would be a restriction reducing effectiveness.

4. Finally, as might be expected from essentially individual studies, one does not see in the literature any agreement on the minimal characteristics of an evaluation system. Before further studies or synthesizing can be productive, some framework of a model system must be established so that some selection process can be devised for identifying preferred measures. These measures may not be the final ones, but we seem to be unable at this time to even agree on a starting place.

Without citing specific studies, some characteristics of a system could be postulated as follows:

a. A system of evaluation must contain as many measurable elements as possible, and must express them in a precise language which minimizes errors in interpretation based on social connotations. While this language is usually mathematical, it need not be in this form exclusively. From the measurable elements, we should be able to build profiles of individual libraries, much as test material is used to outline the personality profiles of a person.

b. An evaluation system must be essentially a closed one so that it can decide and predict internal movements and reactions from outside stimuli. Its accuracy needs only be to the point where the predic-

tions can be used for middle-range planning of five to seven years. An evaluation or measurement system should not be used for detailed short-range decision-making, and it is not useful for long periods of ten or more years since too many social changes can occur in this period of time.

c. The units of measure in an evaluation system should be related to identifiable determinants of potential service or actual use. The determinants in turn must be independent enough so that they can be combined in different ways to produce different total programs. It is rarely possible to measure a total program with a few indices. For example, possession of material, access to material and type of use are significant determinants. Similarly, the number and training of professional personnel is meaningful. There is always some risk that the selected determinants will produce a high correlation with each other (as found in the present federal statistical reporting system) and as a result only measure a part of a total program or produce an overly simple evaluation system.

d. A corollary to point c is that the system for measurement should not contain details on essentially internal alternative uses of resources which do not change a basic service or use. A simple illustration is the recommendation made at a conference several years ago that one should determine the percentage of periodicals which are bound, the replacement rate or loss ratio of material, availability of direct parking, size of the custodial staff, etc. It would be interesting to know something about each of these items (if for no other reason than curiosity), but their place in a library program is reflected better by other data. Moreover, any one or all of them would have to deviate markedly from accepted norms before affecting the overall character of a program. As an illustration, low use of a library may be caused by inadequate parking, but in an overall measurement scheme we are interested only in the low use. The *causes* are a secondary issue and can be multitudinous and unique to a particular library.

e. The system should be structured so that measurements can be added at a minimal cost to answer specific local questions.

f. The system must obviously be more descriptive and accurate than the existing one and must be acceptable enough to the profession that it can be implemented. This requirement does not mean that it must reflect a compromise to the point that a large majority approve it by a vote or consensus, but rather realistic enough that it can be ordered, and members of the profession will accept the

order as less burdensome than the anxiety and frustration of resistence.

In summary, the efforts to measure or evaluate library service have been significant. One is impressed with the accomplishments in a short twenty-year period, and, as summarized by the authors in this issue of *Library Trends*, the studies show steady progress in seeking out the fundamental determinants of library service and applying to them increasingly sophisticated research tools and concepts.

There is still marked discontinuity in the studies, and their applications have been very uneven. The discontinuity is caused in part by (1) a lack of strong formal commitment by many people in the profession—at least not strong enough formal commitment to force some broad-scale experimental applications; (2) the underemphasis on values by researchers who, in an effort to increase objectivity in thinking and analysis, have tended to become too pure; (3) the failure to set out in writing some basic assumptions about the nature of library service on which comparative evaluations or measurement systems could be structured; and (4) the failure to agree on the minimal characteristics or framework of an evaluation system. The overriding need now is to synthesize the results of the many studies cited by the authors and develop tentative theories to be applied systematically to a large number of libraries.

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Commentary

NANCY C. FELDMAN

IT IS CERTAINLY praiseworthy that librarians are addressing themselves to the serious problem of evaluating their services; it is also noteworthy that they do so with careful, even painstaking research and with an earnest awareness of the prominent place of evaluation in today's society.

Attitudes toward evaluation may often be a key to the kind of evaluation employed and may indicate much about the subjective feelings and status position of the group being evaluated. Indeed, the attitude of the group toward evaluation may be even more indicative than the actual evaluation results of the relative security of the group.

When a group is insecure either about its value to society or of society's perception of that value, yet is professionally trained and responsible and sincere in its desire to do well, evaluation is viewed as necessary and justified but extremely threatening. The profession or group being evaluated tends to become acutely self-conscious and overly articulate about philosophy and lofty ideals, and less clear about practical details, realizable aims and methods of attainment. Words are substituted for action, and methodology is belabored and idealized.

I have an unevaluated hunch that librarians are in this position. Knowing that evaluation must take place and approving of it, they are nonetheless needlessly insecure about the results. Consequently they do a defensive and verbose job of evaluating—one that blunts and is ineffectual—rather than one that is piercing and illuminating. I believe this hunch is documented in what is included in this issue; but even if this basic hypothesis of needless insecurity is not valid, the remarks with regard to evaluation may still be of value, independently.

Clear and attainable goals for each different type of library appear to be a prime necessity. Evaluations must be set in terms of how well goals are being set and achieved. When goals are vaguely stated and undifferentiated, evaluation is frustrating and obfuscating; the unclear

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yardstick of necessity yields an unclear measurement. It would seem that libraries should have reached the point where they would have evolved separate sets of broadly differing goals for each major type of library; academic, research, public school, industry, university, public, etc. Possibly the profession has grown so rapidly and so well that it has not yet seen the need for differentiation within the profession. Or it may be that the profession has wisely obscured this differentiation to facilitate a flow of personnel and ideas within the profession. In either case, for the purposes of evaluation, realistic, pragmatic goals for each broad type of library are essential.

These realizable aims should be articulated on a national level for a number of specific types of library. Such statements should provide assistance and flexibility to the individual library, which can then proceed to differentiate from the national goals to its own goals. The national statement would be the launching pad, the working draft from which locals could work, could deviate and could become more detailed. Then evaluation could be conducted in terms of progress toward clearly stated, measurable, if not quantifiable, goals.

The substitution of broad philosophy for clearly articulated goals signifies a reluctance to become aware of the real, pragmatic goals of the library. As a passionate library lover, I must attribute this not to the lack of library service, but to the insecurity of the library personnel. Relying on us passionate lovers, the librarians have been largely evaluating goodwill—and of that there is plenty. Would there be that goodwill if there were not something very solid behind it? I think not. The challenge then is to ferret out precise goals and then reach them.

There are other evidences of insecurity of librarians in regard to evaluation, an insecurity so great that it could indeed be called a cover-up, were not the evidence of sincerity equally great.

An evaluation serves one of two purposes: it either feeds back into the system, correcting and changing it, or it serves as an outside, justifying report. There is no question that public agencies, as libraries often are, need to produce this kind of justifying report, but this is not a genuine evaluation. The genuine evaluation should contain within it the techniques whereby needed change is fed back into the system. Either these techniques were not considered within the scope of this issue or they were not included. If evaluations are to be worth the time, money, effort and trauma expended, they must be structured to include feedback loops in the very design of the evaluation. The reader of these articles is always left wondering what happened. Are the evaluations gathering dust upon a shelf? Contemporary evaluative

techniques must include in their essence the input back into the system—the change mechanism.

Evaluation has come to be a profession in and of itself. Certain disciplines, chiefly the behaviorial science—economics, sociology and psychology—pride themselves on the sophistication of their training and techniques. It seems, perhaps, that when libraries have employed outside evaluators they have relied too exclusively on business evaluative techniques which are often geared to management only and not to delivery of services in close conjunction with management. Moreover, in most cases the librarians have not seemed to avail themselves of the skills of the trained evaluator, particularly of those in the behavioral sciences; they seem to have preferred to reinvent the wheel, to design the survey themselves. This is most obvious in the hesitance to hire evaluators outside the library profession. Why not use trained people? All fields tend to trust the people within their own professions, knowing that these people have been socialized in the same way they have, that they will share basic assumptions, elide common difficulties, and, most of all, that they will be able to exert professional punishment if they go too far. Successful businesses, on the other hand, do just the opposite. They ask for evaluations from the most ruthless and blunt-spoken, secure in the thought that they can take what they want and discard the rest, and that the evaluation will be an in-house affair arousing no public discussion. The latter is possibly an important aspect. If evaluations of libraries are going to be public and political knowledge, then perhaps the gentle, obfuscating techniques delineated in the papers may be a necessary protection. If the libraries really wish to know, they should hire highly trained outside evaluators who will use a variety of spotlights on them.

If the libraries really wish to know, then there will be no resistance to the unobtrusive techniques mentioned. The library's moral hesitation to use unobtrusive techniques is puzzling and unduly protective of its personnel. There is no question that there exists some controversy on the use of unobtrusive techniques, but that phrase covers a wide range of methods and the controversy has not extended to this simple method of asking library personnel questions by posing as a consumer rather than as a surveyor. This kind of personnel testing is widely accepted within business and the professions and, indeed, it is probably the only way that an accurate assessment of courtesy and efficiency in dealing with the public can be made. If there is an ethical problem, it can be obviated by an announcement that the evaluation will be taking place between certain dates. Consumer-posing techniques have helped

many organizations to train and upgrade their personnel and are in no way demeaning to either the professional or nonprofessional worker. They are, however, revealing.

Some cognizance should be taken in evaluating that the library is, in most instances, in a monopoly position. Bookstores, doing without informal borrowing patterns, would appear to be the only competition. Relative use of branches and book buying indices might be utilized, but the special techniques applicable to monopolies should be a part of library evaluation.

Another evaluative technique largely neglected by these articles is that of including nonusers as part of the evaluating group, instead of considering only users as qualified judges or consumers. Such a limitation can be valid only for a service that is not oriented to expansion, such as a highly specialized industry library. This limitation is inconceivable in a public library or school library of any sort. Nonusers must not only be considered a vital part of the evaluator group, but must be sought in an aggressive, carefully selected and categorized manner.

Neither users nor nonusers tend to be creative in response to survey or interview. For this reason, as well as for efficiency in synthesizing and analyzing, checklists are frequently presented, such as: If the following six services were offered, which ones would you use most? Which others would you suggest? This is a responsible technique which often stimulates more creative responses as well as being a good determination of new directions. The use of the in-depth interview is another method that has been proven revealing and indicative, yet was not mentioned in the accompanying articles.

The avoidance of these more sophisticated techniques might indicate either an unwillingness to hear results, an unwillingness to utilize other experts, or an unawareness as to how far the area of evaluation has progressed. I suspect again that insecurity about the public's response has made the librarian subconsciously avoid hardhitting answers at the same time that professional responsibility and awareness has made him attempt evaluation of some sort.

Let us now look at some social trends which will surely apply to library evaluations. The first is the concept of accountability. Libraries must specify to whom they are accountable, and in what ways, before they can judge progress or achievement. The concept of accountability is being widely applied at present to a variety of public services, especially public schools. The burden-shifting of the past—"I could not teach this child to do addition because his parents are getting a divorce"—is being severely and critically viewed, and services are being

asked to deal with the specific problem at hand. As we see the diminution of government block aid, we will see more and more local cry for accountability. The questions asked will be: Is this what we need? Is this what we wanted? Are they doing a good job? Libraries must be prepared to cope with this on a local level.

Closely tied to this is a tendency to put everything on a dollars and cents basis—the cost-benefit analysis and social cost accounting being two notable examples of this. I think we may go too far in putting a dollar figure on everything. How can the value of a child reading a book that changes his motivation or his life be determined? It may well be that libraries in conjunction with like agencies must resist this trend or at least limit its use to gauging productivity of certain departments and certain classifications of employees.

Increasing leisure time and the very real problem of what to do with it will be offering libraries new opportunities in new directions, from utilization of volunteers and more community activities, to more research capacity in areas of community interest, etc. Responsiveness to this trend should be a measurable aim as the library becomes a central facility in the less structured aspects of the individual's life.

What Alvin Toffler has described as "ad hocism" will surely affect library organization and hence evaluation. Ad hocism is an extension of the task-force type of organization wherein a staff and materials are assembled for a particular project, existing only as long as that project. As libraries move into this type of administration, evaluative techniques for the particular project will have to be instituted and, additionally, techniques for deciding whether ad hoc projects are worthwhile or too disruptive to ongoing services. As libraries seek to reach more publics, ad hoc projects will probably become increasingly important, and libraries will be evaluated on their ability to react quickly and flexibly to new community needs.

Communities, too, are becoming more aware of their needs and of their desire for an increased sense of community. This desire, however, is increasing at the same time that federal funding is decreasing, making the community face the fact that needs are hierarchical, that one may displace another and that all can be listed by priorities. Libraries will fit in somewhere on this list of priorities, and must in turn become attuned to priorities within their own system. Is reference as important or more important than the children's story hour? In a less affluent but more self-conscious world, these are the kind of questions an evaluation should answer. There are many kinds of scale methodologies currently in use in the behavioral sciences which should

be of help here. The important thing is that libraries recognize the comparative nature of needs within government agencies and community services and within the library itself.

The impact of technology upon libraries, as well as upon every other facet of life, is one that must not be overlooked. The universal card, easy reproduction of materials, fascimile transmission, research printouts and decentralized terminals are all technically—and often financially—available, but we are slow to adjust our habits, our patterns and our thinking to them. Libraries should include in their evaluations a searching series of questions as to where technology should or should not be adopted, where it is feasible and desirable and where it is not. When faced with a change in our thinking, the first reaction is that technology is not needed. This reaction should be rigorously and ruthlessly challenged. As we all know, technology is coming—and for libraries much of it is already here.

Decisions of this nature will necessarily involve libraries in long-range planning, another notable trend. There were no questions in any of the evaluation papers that dealt with this aspect of the library, yet as in all other fields long-range planning is essential. Services, referrals, acquisition, and every aspect of the library depend upon long-range planning; it would seem that an evaluation would ask searching questions in regard to the library's image of its future. Many evaluations now include an evaluation of a five-year plan or a three-year plan for every operational aspect. Increasingly we are recognizing that the future does not just come, that we do not need to accept trends but that we may shape them, that we may choose among alternatives, never with whole knowledge, but with at least some effect. In some way, libraries must come to grips with where they wish to go and how they are going to get there.

As we become more involved with future planning, there is growing realization that a small managerial group or a professional elite cannot plan or execute its plans without public participation. Recognition of the place of the public, its role and its capacities, should be part of any organization and any evaluation. How is the library allowing for public input into its decision-making and its evaluation? This is the kind of question that will be asked in the years ahead.

At the same time that libraries are reaching out broadly to new publics, to the whole public, specialization is advancing rapidly. As stated above, librarians cannot be experts in evaluation and should not be expected to be. This trend toward specialization will have impact on the libraries in a variety of ways as projects and roles emerge for the

nonlibrary specialist in a library setting. Evaluating where the professionally trained librarians can be used best and where other training is more valuable will become an important decision. Evaluation should give the library administrator the decision-making tools.

And finally, there is the new word, ambience. What does the library feel like? What does it say to the public, or to each of its publics? The physical equipment of the library is not just books, but how the chairs are arranged and the provisions made for comfort. These are the intangibles that have made libraries magic places for generations of Americans. As a little girl in a small town library, my ambition was to start with the *A* shelf and read everything through the *Z* shelf. The atmosphere of the library made me spend hundreds of afternoons there curled in a pseudo-colonial maple chair in front of a gas log fire. My tastes may be more sophisticated now, but that atmosphere has never been surpassed. A variety of atmospheres is necessary for a library—and the physical appearance and ambience (two separate things) should be evaluated along with the number and quality of books on a shelf, for it is with this ambience that millions of us have been so hooked, have fallen so in love with libraries that we will never get over it. Dear librarians, please do not be so insecure; you can take a real evaluation, you will show up well—and you will learn a great deal.

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Commentary

LOWELL A. MARTIN

THE PAPERS in this issue identify the recurring problems of library evaluation: vague objectives, uncertain measures, and half-formulated standards. Before examining these problems, comment must be made on the conception of evaluation—its purpose and nature—that is assumed by the various authors and that limits the total impact of the issue.

EVALUATION AS AN INTEGRAL AND CONTINUING PROCESS

Evaluation is seen in most of the present papers as a fairly distinct and separate activity in library planning and administration, a pause to take stock and assess strengths and weaknesses. At a given point in time a cross-section is extracted and held up to examination. This is like a periodic visit to the doctor, and as such is to be commended. The "doctor" in the case may be an outside surveyor commissioned to give a diagnosis and prescription. In the evaluations properly required for many federally funded projects in recent years, the measurement and assessment responsibility was explicitly given to separate and independent assayers in order to get judgments free of vested interests. A library may embark on a project of self-evaluation on its own, for example examining the collection by means of staff committees or assessing reference service by means of a month-long sample analysis.

Whoever the evaluators may be, the process of evaluation in this more common conception is an activity apart from the normal order of operation and service. When the project is done, and conclusions are in hand, one seeks to apply them, adjusting program or method as the results indicate, and then gets back to the regular business of the day.

One limitation in this approach is the difficulty in jumping from measured conditions to diagnosis of what is wrong and then jumping again to a prescribed course of action. The doctor can make a mistake at either step—and the wise doctor has the patient come back in a day

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or a week or a month, in order to check his analysis and change or adjust his prescription if necessary, thereby setting up a process of feedback and continuous evaluation. Assuming the right and fitting conclusions are drawn from a single, finite evaluation study, they may still not be applied correctly. Their presentations may not have been convincing, or results could be interpreted in different ways, or proposals for action may run into entrenched interests. Many a commissioned study stands unheeded on the shelves because of some combination of these factors. Even if the findings of the evaluation are convincing and are applied, results tend to be singular rather than continuous. The evaluation revealed or documented certain shortcomings, adjustments are made to meet them, and then at some indefinite future time—but perhaps never—another examination will be made to see if the hoped-for improvements actually occurred.

Evaluation conceived as a separate, discrete endeavor, a pause to see where one stands, is likely to lead to a report (after all one has to show that the project is finished), but is less likely to lead to change in the organization. Short of revolution, institutions and bureaucracies do not sharply alter course but at best evolve, give a little here and there, try and try again, in an ongoing process.

Evaluation, to have effect, should be part and parcel of this process. There are occasions when the separate intensive study, either by staff or by outsiders, can lead to action—for example, when a new administrator seeks to set course, or when some problem has become enmeshed in emotion and/or politics and must be freed by concentrated examination. But in most circumstances evaluation and action should be in a constant interchange, if for no other reason than to confirm that previous decisions were wise and effective, more likely to affect recurring adjustment because more often than not human judgment is somewhat short of omniscience.

Back a few decades POSDCORB was the approved formula for administration, the letters of the acronym standing for a neat progression from planning to budgeting. Oddly enough, evaluation, reassessment and appraisal were not included in the formulation. Injection of continuous evaluation and feedback into corporate and institutional decision-making has been one of the notable developments of recent years. Business early established financial controls—after all, its objective is to make money, and this is the measure of its success. Automobile companies, for example, that built in such financial evaluation have flourished while those that failed to do so have not survived, no matter what the quality of their product. Government and institutions have

sought to follow suit—thus PPBS (Planning-Programming-Budgeting System), MBO (Management By Objective) and CIPP (Context, Input, Process, Product). The limited success in this regard in the public sector is due to the recurring problems of evaluation's lack of clear objectives (profits in the case of business) and uncertain measures (sales and dollars). By its standards business makes profits or goes bankrupt; the public agency is more likely to ask for a supplementary appropriation.

Building in evaluation as an integral part of planning and decision-making is not easy. One can mobilize for the one-shot study, or commission it from the outside. Continuing evaluation, on the other hand, calls for (1) a critical and appraising outlook on the part of staff and administrators towards their endeavors, which is not compatible with the faith that sustains many librarians, (2) skill somewhere within the organization in the techniques of measurement, and (3) hard-headed appraisal of results independent of those who have a stake in the success of the enterprise being evaluated.

The closest libraries have come to continuous, integral evaluation is in the systems offices recently set up in a few of the larger university libraries. Even here there are significant limits, for systems analysis is more likely to lead to changes for the sake of efficiency than to changes for effectiveness. We depend now primarily on administrators to set the process of evaluation in motion within the organization, and only a minority have the objectivity and the security to be willing to unlease a force that might well reflect unfavorably on that very administrator's stewardship. Evaluation, carried to its conclusion, can create tension, and only those who know their Mary Follett [1] and the value of conflict in an organization are prepared to make waves.

Examples of continuing and integral evaluation in library projects can be cited. A current Philadelphia inner-city project has an ongoing but independent evaluation staff, reporting by means of rigorous methods, but reporting back monthly and not holding its evidence for some final blast that would pronounce once and for all on the situation from the outside.[2] The Deiches Studies of the Enoch Pratt Free Library [3] have utilized an outside consultant, but in each of the series of studies over ten years—each directed at a problem identified by the Library—the results are incorporated into the organism before the next study is undertaken. By whatever means, it is the immediate feedback, the interchange of action and appraisal, that promises to get systemic results from evaluation.

Beware the separate single-shot evaluation that may be more exor-

cism or expiation than resolve to do better. Espouse built in and continuing evaluation that assesses and redirects daily and monthly and yearly, seeking to adjust the steering wheel frequently rather than taking one turn to get to the top of the mountain.

CLARITY OF OBJECTIVES

The papers in this issue consistently point to definition of the purposes of the agency or project being appraised as the starting point of evaluation. How can one judge the adequacy or effectiveness of any enterprise except against what it is designed to do? We all subscribe to this logic, but there are few fresh statements of purposes and functions of libraries.

Objectives and purposes can be set at several levels from societal and institutional to the library within an organization and to an activity within a library. The less encompassing the level—the more circumscribed the activity being appraised—the easier the definition of objectives and the more conclusive the evaluation. Thus we have the specific examples of relatively satisfying evaluation reported in this volume: interlibrary loan performance as one element in collection appraisal (objective: fill all or most requests received); appraisal of reference service by anonymous shoppers (objective: provide accurate information); the inventory assessment of adult services (objective: readiness to serve). But no one of these indicates whether the loans or information or services contribute to the social ends for which the libraries exist.

Academic, school and special libraries derive their purposes from the agencies they serve. Their task is to define their particular role or roles within the organization, showing how they contribute to institutional goals either directly or in support of other units. This is difficult enough, and more than one company, school, or college library languishes because the task has not been completed or its results not convincingly communicated.

The public library is particularly at sea in this regard, for it seeks to clarify its mission directly at the level of societal goals, not having the guidance of institutional objectives. Lacking institutional charts to steer by, the public library pursues an uncertain course. From its founding it has been pushed by conflicting winds. On the one hand is a professed goal of an educational character, which—if it means anything beyond an approved word—implies selecting among alternative purposes and mounting of collections and programs that contribute to the aims selected. This is not the way the public library builds its program. On

the contrary, it listens to hear what people want and then serves demand: this is called being responsive to the community. This is in the sense that the department store, the liquor store and the candy store are responsive to the community, except that they do not claim to be educational agencies nor do they put in a request for funds from the public purse. It is interesting to note that social scientists, commissioned to examine one or another aspect of the public library, ask first about objectives and when they get vague answers proceed to their own formulations, which often leave librarians uneasy.[4]

Until objectives are clarified and rendered in functional terms, library evaluation will neither characterize the agency for nonlibrarians (governmental officials, educational authorities, the public at large) nor furnish verified judgments on which the library administrator can act. That is the reason that some of the efforts reported in this issue —the user studies mentioned by Monroe, the checklists mentioned by Bond, the reference transaction enumerations mentioned by Weech—are recognized by the authors to be limited and subject to criticism. Whatever degree of validity the evaluation studies of federally financed projects mentioned by Mahar may have derives from assessment within the stated purposes of the grants.

If clarification of objectives is so important for evaluation as well as for other purposes (public relations, for example), why have librarians made so little progress in this regard? It is in part, I am sure, because the exercise is never easy for public agencies; the roles of such agencies are usually a compromise between mission and demand. Also, partly I suspect because librarians recognize that an aura attaches to their agency—each member of the public having his own concept of "library"—and librarians do not want to dispel this aura with hard choices that may please some supporters but would probably alienate others. And finally, I fear, it is because some librarians want to stand on the purity of their motives and the rich humanity of their collections, and do not want to be circumscribed by concrete objectives, as are most other toilers, from automobile salesmen to wearers of the cloth. How else does one account for the fact that librarians as a group, assembled in solemn conference, subscribe to fine objectives which are not carried out back home?

VALID MEASURES

If one knows what an agency seeks to do, the next problem in evaluation is to find measures of what is done. The authors of this volume point to the pitfalls for librarians in taking this step, and search

out the newer efforts to get accurate and relevant statistics about library service.

It is clear from these reports that more attention has been paid to preparation for performance than to performance itself, by practitioners and evaluators alike. We know far more about what goes into a library than what comes out of it. What titles are held? How many librarians are on the staff? What services are provided? This is comparable to an inquiry into schools that examines all aspects of the agency except what children learn. Schools, like libraries, having stressed input rather than output, were ill-prepared for the hardheaded output studies of recent years: the Coleman report,[5] which found only limited correlation between such cherished aims as limited class size, extent of education of teachers and number of volumes in the library, and the performance of students, and the Jencks report,[6] which found limited relation between amount of education and earning capacity in adult life. What if we were to find that a public library which provides multiple copies of best sellers has no more impact in terms of agreed upon objectives than one that expects readers to buy such publications in the marketplace, or if we were to find that a college library that extends its holdings to several hundred thousand volumes influenced the education of students no more than one with a smaller and highly selective collection? Evaluation by input measures serves those who work in an agency, but not those who use the agency, nor those who must pay for it.

Several of the articles in this issue refer to user studies as a growing trend in library evaluation. This is a step in the right direction, for it gets closer to performance and effect; how close it comes, however, is a moot question. People judge a service on the basis of what they expect from it; they have an assumed standard, and it is often modest and tentative. To many—the community resident, the student, the official in business or government—the library is a welcome and somewhat unexpected aid, a largess, and they are grateful for whatever they get. According to Weech's article they are even grateful for information which is inaccurate, for studies which he reports show that librarians believe the information they supply to be accurate, and users accept it as such, when in fact it may be incomplete, out-of-date, or plain wrong. Preconceptions held by users may color their assessments; thus, Mexican-American families have a tradition of not borrowing, particularly from public sources, and scientists, according to some studies, favor small working collections rather than comprehensive libraries. Users are not well qualified to suggest new and additional services from

which they would benefit; one first invents the automobile and television and even Coca-Cola, and makes them available, rather than waiting for people to ask for them. User data are one source of evaluative measures, and should be added to the battery of indicators, but like any measure should be interpreted for what they do not as well as what they do indicate.

Two commonly compiled library measures do deal with output rather than input: circulation statistics and reference counts. It is fashionable to disparage circulation figures. Certainly they have limited validity, for example, in measurement of a special library that provides much of its service by telephone. But in a library that seeks to encourage use of materials, and in which a significant part of the use occurs off the premises, circulation figures are a valid measure of response. Other things being equal, increased circulation figures denote greater impact for whatever the purposes that prompted the acquisition of resources in the first place, and if circulation goes down that impact is diminished no matter what the ingenious justifications that may appear after the fact in annual reports.

Of course circulation is not the sole or the complete measure of a library. In a multipurpose and multiprogram agency there is no one and complete measure of performance, and a search for the magic number only compounds the problem. Surely evaluation of an organization involves more than one computation. Circulation in a public library may account for one-half of what the agency does—and this would seem to be an argument for using and refining it rather than rejecting it. Further, what figures we have show a considerable correlation between circulation and other use figures in the community agencies.

Of course, one does not use circulation statistics from two libraries serving quite different clienteles as a basis for comparison of effectiveness. Every study of adult library use shows a relation between educational level and amount of response. Again, this would seem not to be a reason to reject the measure but rather to refine it so that response with educational level controlled could be determined, a by no means esoteric statistical manipulation. With the relation between clientele characteristics and prospective use known, variable standards can be devised which would show, for example, whether ten items circulated per capita in a community with an educational level close to college graduation represents greater or less response than five books per capita in a community with an average of eight years of education.

Reference and information service, most librarians agree, is of great

importance, and indeed is sometimes held up as the heart of the matter. Despite this I have yet to find a library that has kept meaningful reference statistics over a sustained period that would permit the tracing of trends. From time to time categories for recording are set up and then become blurred; groupings are then simplified and still the record is incomplete. I cannot convince myself that reference service is really so complex and subtle, as compared with what goes on in a school or a hospital, that it cannot be recorded within reasonable limits of accuracy. If administrator and staff were really convinced of the value of such data, and genuinely committed to evaluation of what they do, the brain power and the diligence of librarians is certainly adequate to get the record straight.

The problem is not to find one measure of impact or effect but to identify several that together indicate activity and response in relation to objectives. Indeed it may not be measures as such that we are seeking (the term suggests a yardstick or a thermometer), but rather indicators that objectively reflect reality but that still require judgment for interpretation. The current study at Rutgers University, under the bold title "Measurement of Effectiveness of Public Library Service," should carry us some distance in this direction for one kind of library service. The "document exposure" index proposed in the recent study by Morris Hamburg,[7] while admittedly exploratory, probes toward an indicator that may apply to the various types of libraries.

STANDARDS FOR EVALUATION

Even with objectives clarified and measures in hand, one still needs a criterion, a bench mark, against which to interpret data. A recent issue of *Library Trends* was devoted to library standards, and need not be recapitulated here. But perhaps because of that previous issue, standards are given only limited attention in this volume, and therefore deserve some comment as an element in evaluation.

Actually most standards in the library field have not been designed as aids in evaluation. The more recent statements have been exhortations to newer concepts of library service (library systems in the 1956 statement for public libraries and media centers in the 1960 statement for schools, the former refined in a 1966 document and the latter in the 1969 school media standards).[8] Earlier they were formulations of minimum levels—not "standards" at all if this means measures of quality—and were designed to bring up stragglers among libraries to a kind of tolerable level of mediocrity. In content they have stressed principles—the dicta by which a library should be run in order to

conform to prevailing professional concepts of good service—and have included relatively few measures or indicators. What measures are prescribed in the official standards documents have not been validated: do we know that 1.5 books per capita will meet the needs of a community, or that one librarian for each 250 students in a school can provide full media service? Some of the so-called standards are inadequate on any logical grounds. Compare, for example, the broad and noble objectives set forth at the outset of the public library document, and then consider whether they can be achieved by providing one librarian for every 2,500 people; the crews on the garbage trucks in cities and the number of policemen exceed this ratio many times.

What are the sources of existing standards, the basis on which they have been built? One approach is to determine what exists at a given time and raise the level a little to create a "standard," as though a desirable standard of health were to be not quite as sick as most people. Another approach is to pool the wisdom of the seers, usually meaning the professional seers, and set forth their combined judgment. The library field has used both of these approaches to the present time. Or, as a fresh alternative, one can approach standards as an essential element in evaluation, and go through the laborious but necessary sequence of first making objectives explicit, then establishing measures or indicators that bear on the objectives, and then determining the amount or extent of the indicators necessary to achieve the established objectives. This amount or extent or degree constitutes evaluative standards.

Several library groups are again at work revising existing standards. They can raise the prevailing figures a notch or many notches, depending on their disposition; or they can seek new concepts of service or organization and remake standards around them. If they want to establish measures of library effectiveness, they will have to go through the full evaluative process, all the way to validation of proposed standards in the real world with real people.

Evaluation of an agency occurs either when those responsible for it are enough concerned temporarily to call in evaluators, or enough concerned permanently to institute continuing evaluation as an integral part of planning and decision-making. Without that concern, relatively little evaluation occurs. Libraries face many technical problems of defining measures and recording statistics, but these can be solved—indeed would have been solved by now if the concern were great enough. Now some voices are being raised for more self-

examination, and more funding authorities are asking for evidence of accomplishment, so that some efforts are underway. But among libraries generally little real attention is being paid to the matter. This raises the question as to whether librarians as a group really want an evaluation of their institution.

The response of librarians, assuming it is negative, may not be the decision that prevails. Service agencies, as well as commercial producers, are on trial in a culture that has developed a deep-running scepticism. Schools are being subjected to scrutiny as never before, and universities have gone through trial by fire, not without being burned. Public libraries as yet have not been challenged as much, except by individuals within their own ranks, but the uneasy shifting about of top public library administrators among positions and even their dismissal in some cases may be a symptom. On the public authority side, rather than a challenge being laid down, too often there is dismissal of the request for increased funds. Libraries directly serving the manufacturing and retail and financial complex have had a bit of holiday, while profits have been at peak levels, but the prognosis for company libraries and industrial research libraries may change if the warnings from economists of a downturn in the private sector prove true.

Broad scepticism and questioning come to a focus in the pressures on fiscal authorities, in cities, in schools, in universities. The several types of libraries have felt the financial pinch, and it will get worse before it gets better. They are challenged to prove their worth, and either librarians will come forth with evaluative data to support their case, or officials will assume evaluations that will undermine the case. This accounts for the stance of the present federal administration in relation to libraries: this service is not essential, the administration has said, and the library world has not been able to come up with evidence to the contrary.

Not only whole agencies are being evaluated by the public in general and fiscal authorities in particular, but performance by individual staff members will increasingly be judged. Accountability is a tricky game, but it will be played. One response is to feint and dodge, hoping the questioners will tire and go elsewhere. Or evaluative data on individual performance can be responsibly gathered, and it could even turn out that librarians are relatively productive workers.

For these several reasons—professional, financial, personal—librarians would do well to mount their own evaluative programs. The papers in this volume show that some effort is being made along this line, but they show even more the limited progress that has been

made. Evaluation has been a marginal activity in libraries, engaged in sporadically, often carried out half-heartedly, its results applied reluctantly. The record to date, as reported here, shows libraries to be in a pre-evaluative stage, by turn curious about or perturbed by the next stage, and occasionally reaching forward into it.

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3. The first in the series was *Students and the Pratt Library* (Deiches Fund Studies of Library Service, no. 1). Baltimore, Enoch Pratt Free Library, 1963. The fourth volume in the series, on adult services, is scheduled for publication in early 1974.

4. For example, see: Banfield, Edward C. "Some Alternatives for the Public Library." *In* Ralph W. Conant and Kathleen Molz, eds. *The Metropolitan Library*. Cambridge, Mass., M.I.T. Press, 1972, pp. 89-100; and Hamburg, Morris. *A Systems Analysis of the Library and Information Science Statistical Data System*. Washington, D.C., U.S. Department of Health, Education and Welfare, 1970.

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7. Hamburg, *op. cit.*, pp. 251-322.

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Forthcoming numbers are as follows:

April, 1974, *Science Materials for Children and Young People.* Editor: George S. Bonn, Professor, Graduate School of Library Science, University of Illinois, Urbana-Champaign.

July, 1974, *Health Sciences Libraries.* Editor: Joan Titley, Health Sciences Librarian, University of Louisville, Louisville, Kentucky.

October, 1974, *Library Services in Metropolitan Areas.* Editor: William S. Budington, Executive Director and Librarian, John Crerar Library, Chicago, Illinois.

January, 1975, *Music and Fine Arts in the General Library.* Editors: Guy A. Marco, Dean, School of Library Science, Kent State University, Kent, Ohio; and Wolfgang Freitag, Fine Arts Librarian, Harvard University, Cambridge, Massachusetts.